DO DIFFERENT TYPES OF NEGATIVE EVENTS LEAD TO DISTINCT ADAPTIVE FUNCTIONING THREATS?

by

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ABSTRACT

The different negative events that people experience may threaten distinct forms of adaptive functioning. A growing literature on the narrative study of self and well-being suggests that one way people may resolve adaptive functioning threats is through narrative meaning-making. However, past research shows that meaning-making is not always linked to salutary effects. Meaning-making may be most likely to restore adaptive functioning when people's narratives address specific threats associated with specific types of negative event. However, we know little about the types of threats that may be tied to different negative events. The current studies used an online, experimental, repeated measures design to test which types of adaptive functioning threats are linked to what types of negative events. Understanding whether particular adaptive functioning threats are tied to specific negative events may provide a framework for theorizing about the most beneficial types of meanings to be made when narrating specific negative events.

Participants spent 2 minutes recalling four negative events: actor/competence, target/competence, actor/relatedness, target/relatedness (event order was randomized). Afterwards, each participant responded to a battery of adaptive functioning measures. Study 1 examined these topics in an undergraduate student sample. Study 2 examined these topics using a community sample of MTurk workers who ranged from 20 to 69

years of age. In addition to testing the extent to which different types of threats arise in different types of events, we also tested the extent to which individual differences mitigated threat-level perceived. In Study 1, we examined the impact of psychological well-being and emotional stability on levels of threat.

In Study 2, we also examined age as an individual difference. Different negative events led to distinct adaptive functioning threats when individual differences were not accounted for. However, the majority of the variance in levels of perceived threat was explained by individual differences in well-being, emotional stability, and age. Overall, this pattern of findings suggests the importance of idiographic methods for understanding how people perceive negative events. Furthermore, the pattern suggests that beneficial meaning-making is likely a person-specific, as opposed to event-specific, process.

CONTENTS

Appendices

LIST OF TABLES

CHAPTER 1

INTRODUCTION

The different negative events we experience in life may have consequences for distinct forms of adaptive functioning. For example, the dissolution of a desired romantic relationship may threaten a person's sense of feeling connected to, loved, and desired by important others. Failing a college course may threaten a person's sense of being able to competently pursue academic goals. Possibly as an attempt to make meaning, and move past such emotionally charged events, people frequently narrate them, expressing them in storied form to others (Pasupathi, McLean, & Weeks, 2009; Rime', Finkenauer, Luminet, Zech, & Phillipot, 1998).

If the meanings that people make in their narratives address specific threats associated with specific negative events, meaning-making may help restore adaptive functioning. Yet we know little about whether or not different negative events create distinct kinds of adaptive functioning threats and little about the implications of those threats for meaning-making. Thus, failing to consider how different events may create particular kinds of threats and potentially constrain meaning-making is an important limitation to understanding when and why meaning-making "works" for people.

The current studies test the idea that distinct negative events may pose distinct

adaptive functioning threats. Study 1 examines whether different types of negative events are associated with different types of threats using an emerging adult, undergraduate student sample. Study 2 tests the same question using a community sample of adults ranging from 20 to 69 years of age. In addition to examining the extent to which different negative events threaten specific forms of adaptive functioning, these studies explore the extent to which individual differences, psychological well-being, and emotional stability mitigate threats associated with different negative events. Study 2 also explores whether differences in age across adulthood matter for those relationships. Understanding whether particular adaptive functioning threats are tied to specific negative events may provide a framework for theorizing about the most beneficial types of meanings to be made when narrating specific negative events.

Defining Adaptive Functioning

We take a broad approach to what constitutes adaptive functioning in the current studies. We use "adaptive functioning" to refer to a variety of psychologically healthy and positive characteristics, like feeling competent. To select specific measures of adaptive functioning in the current studies, we drew on past work on agency (individualized control and mastery) and communion (connectedness with others). An idea that has transcended cultures and time is that adaptive functioning is linked to personal agency and communion with others. For example, Wiggins (1991) and McAdams and colleagues (1996) trace the idea from Confucianism and pre-Socratic traditions of thought, respectively, to modern Western Psychological thought.

Much of the past research and theory on agency has focused on the experience of

being an individual, differentiated from others, who has intentional strivings for mastery, power, and control over situations (Bakan, 1966; Wiggins, 1991). In this framework, agency is expressed through self-expansion, self-assertion, and self-protection (McAdams, 2001). People's motivations for self-expansion fuel their agented actions, and those motivations are linked to other aspects of self, such as memory for experiences and emotions. For example, increased themes of agency in autobiographical narratives are positively associated with self-reported personal strivings for attainment of power and achievement in every day life (McAdams, Hoffman, Mansfield, & Day, 1996). Furthermore, in young men, increased themes of agency are also associated with increased anger over unpleasant experiences (McAdams, 1982). From this self-expansion manifestation of agency framework, striving for mastery in vocational and achievement-related activities may provide important contexts from which people experience a sense of mastery over the environment and self-expansion.

A complementary conceptualization of agency is that people are also responsive intentional agents. In this framework, people have agency in the sense that internalized cognitive processes are associated with enacting behaviors for self-assertion and self-protection. However, from the responsive intentional agent framework, it is also argued that those cognitions and behaviors cannot be separated from the social norms, roles, values, belief systems, and situations that contextualize people's agency (Pasupathi & Winery, 2010; Wellman & Miller, 2006). Thus, agency is "shaped by and responsive to" the physical and social situations in which we find ourselves (Wellman & Miller, 2006, p. 28). Broadening agency to include both the intentional self-expansion and responsive agent views suggests multiple forms of adaptive functioning that may be challenged by

negative events relating to vocational and achievement oriented activities. Below, we refer to those types of negative events as "negative competence events."

In particular, by potentially undermining the link between one's values and belief systems regarding what "should be" attainable by a competent adult (in the U.S. in the current studies), we reason that negative competence events might generate a sense of self-alienation. To the extent that part of the way one defines the self is with regard to accomplishments of personally and socially valued outcomes, negative competence events may be associated with feeling alienated from the "true self." Because negative competence events may violate one's values and belief systems, we also anticipated that they may threaten people's interest and willingness to engage in psychologically minded thought about those events.

Negative competence events, which we anticipate having particularly strong ties to agency, may be problematic for forms of positive functioning that may generally flow from accomplishing desired outcomes in vocational or avocational pursuits. To capture such threats in the current studies, we gathered reports on the following measures: 1) perceived self-efficacy – the extent to which people are confident in their abilities to face and deal with stressors, 2) goal re-engagement – the extent to which people are able to define and take actions to accomplish new goals after experiencing goal-related setbacks, 3) self-alienation – the extent to which an event makes one feel unauthentic and alienated from the true self, 4) psychological mindedness-interest – the extent to which individuals show an interest in reflecting on the psychological aspects (emotional features and cognitive processes) of their own and others' actions, 5) psychological mindedness-willingness – the extent to which individuals show willingness to reflect on the

psychological aspects (emotional features and cognitive processes) of their own and others' actions, 6) perceived choice – the extent to which people feel that they have control/ choice over their actions, and 7) internal locus of control – the extent to which people expect that their own characteristics and actions primarily determine desired outcomes.

Wiggins has argued that communion is the "condition of being part of a larger social or spiritual entity, and it is manifested in strivings for intimacy, union, and solidarity with a larger entity" (Wiggins, 1991, p. 89). Researchers find that in narratives, themes and motives for intimacy are positively associated with striving in the relational domain to develop intimacy and closeness with others (Emmons & McAdams, 1991; McAdams et al., 1996). In longitudinal research, motivation for intimacy as expressed in story themes of warmth and closeness has been associated with better psychosocial adjustment in men over a 17-year time frame (McAdams & Vaillant, 1982). To the extent that the presence of such themes is linked to actual capacity to secure and maintain positive relationships, prioritizing closeness may help one maintain relationships with others over time and reap particular benefits associated with having the psychological need for connectedness met. However, when things go wrong in the relatedness domain, people may experience particular kinds of adaptive functioning threats.

Negative relatedness events may be especially problematic for forms of positive functioning that may generally flow from feeling related to others. In order to potentially capture such threats in the current studies, we gathered reports on the following measures (the numbering is continued from above): 8) empathy for others – one's tendency to take the perspective of others and see events from others' points of view, 9) sense of

loneliness – the extent to which one feels socially isolated and lacking in close relationships with important others, 10) inclusion of important others in the self – the extent to which one conceives of very important others as being closely connected to the self as opposed to distanced from the self, 11) perceived self-likeability – the extent to which one perceives of the self as being a person that others like, 12) influence of others on self – the extent to which expressing the authentic self is constrained by the control or influence of others, and 13) motivation to avoid those who have harmed one in the past – a subscale of Transgression Related Interpersonal Motivation scale, which assesses forgiveness of others (McCullough, Rachal, Sandage, Worthington, Brown, & Hight, 1998).

The avoidance motivation construct assesses the extent to which when one imagines a person who caused him or her harm, he or she is motivated to avoid that individual as opposed to seeking to repair the relationship. In these studies, we viewed being motivated to avoid, as opposed to repair, as a "threat" to adaptive functioning because that motivation could limit the future health of the relationship. If the relationship is important to the self, avoidance as opposed to repair may be a problem for feeling connected to others. However, we review this idea again in the discussion (Study 2) where we acknowledge that, in some contexts, avoidance motivation may be adaptive.

Systematically Distinguishing Event Types

In considering how to test whether different types of negative events threaten those distinct forms of adaptive functioning described above, we were challenged on how to clearly delineate events as being of one "type" vs. another "type." There is no widely

accepted "event taxonomy" to draw on comparable to the Big Five personality framework. We decided that for the current studies, a scheme for distinguishing events should 1) provide a clear and theoretically justified case for why and how events would differ; 2) provide a way of dividing events that maps on to distinctive threats; and 3) provide a division that may elicit consensus, across people, about threats that are specific to different events (i.e., is not too idiosyncratic). We sought a situation theory that described event-dimensions that would potentially map on to specific types of threats. In doing so, we considered the following approaches to understanding situations: The Daily Inventory of Stressful Events, differentiating events by emotions, Social Domain Theory, Personality of Situations, and Self-Determination Theory.

The Daily Inventory of Stressful Events (DISE) Approach

Almeida, Wethington, and Kessler (2002) introduced the Daily Inventory of Stressful Events (DISE) as an interview approach for describing daily stressors (see also Almeida, Stawski, & Cichy. 2011). Almeida and colleagues have tried to understand how specific "features and events in the daily environment contribute to poorer health" both mental and physical (Almeida et al., 2011, p. 1). They seek to capture variability in objective threat levels across stressors and between persons.

Participants are asked to report on stressors they experience over researcher-determined time intervals (e.g., days, weeks). Participants report stressor severity and what he or she perceived to be at risk in the event. Stressors are then categorized by researchers as either interpersonal tensions (e.g., arguments), overloads (e.g., having too much to do), or network events (e.g., a close friend's negative experience). Stressors are

then coded into subcategories by researchers within each of those three broad event-classes. Then, based on semistructured interview responses, each stressor is coded for the relative presence of five threat dimensions: loss, danger, disappointment, frustration, and opportunity on a 0 (not present) to 3 (clearly present) scale. Each dimension is chosen for its anticipated negative impact on well-being (Almeida et al., 2011).

The DISE appears to be a powerful tool for describing variability in severity and forming a priori determinations about types of threats from different daily stressors. This approach seems to meet criterion 1 by arguing for stressors falling naturally into specific domains (interpersonal, overloads, network events). Although it provides a way to describe threats in those different domains, it does not fully meet criterion 2. This is because stressors in different domains may have the same profile of threats. For example, financial domain stressors and interpersonal stressor can both result in a sense of loss. This approach does not fully serve the goals of the current study. Moreover, the DISE approach is consistent with stress and coping theory in focusing on individual attributions regarding stressors (Lazarus, 1999). However, it may be overly idiographic in its approach and thus not meet the third criterion for potential consensus across people regarding what is threatened by different events. This approach may not allow us to fully describe whether most people would agree about which specific threats may be tied to which specific negative events.

Differentiating Events by Emotions

Researchers have also divided events on the emotions they generate. In one such approach, events marked by one type of emotion (e.g., anger) are assumed to differ from

events marked by another emotion (e.g., sadness). In such research with both children and adults, participants are asked to recall events in which they felt different emotions and then to talk about those events either with a parent (Fivush, Berlin, Sales, Mennuti-Washburn, & Cassidy, 2003) or with the researcher (Habermas, Meier, & Mukhtar, 2009).

Another emotion-based approach suggests that emotions may be linked to events through event-related changes in goal states (Stein & Levine, 1990). In this approach, an event in which pursuit of an important goal is blocked by someone else's actions results in different emotions than the loss of something desired. Stein and Levine find that such event features have different repercussions, in terms of experienced anger and sadness especially. People experience anger when something is perceived as aversive, unavoidable, and has its root cause in a human agent, as opposed to a natural environmental event (Stein & Levine, 1989). People experience sadness regarding events in which a desired goal is lost, especially as a result of a natural event, and sadness may be especially likely when one cannot reinstate the lost goal (Stein & Levine, 1989). These findings suggest that events that elicit anger and those that elicit sadness may have distinctive features. They also suggest that both types of events may threaten one's autonomy because goal achievement is blocked.

The emotions approach may meet criterion 1 by specifying features that distinguish events along emotions. However, it may not meet criterion 2 (events correspond to specific threats) or 3 (consensus among people) very well. For example, an event characterized by anger and one characterized by sadness could be equally likely to be associated with threats to self-efficacy. Furthermore past work on emotional

complexity suggests that consequential negative autobiographical events are likely to elicit multiple emotions (as opposed to singular emotional states, like "pure" sadness), and this is especially true for older adults (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). Research has also established that people differ in the emotion regulation strategies they use (Gross & John 2003; Ray, Wilhelm & Gross, 2008). Some people may use strategies that are more effective than others. That may result in ostensibly similar types of events being threatening in different ways for different people. Thus, although past work suggests that we can divide events by emotions, it is not an approach that clearly meets current criteria.

The Social Domain Theory Approach

Domain theorists argue that social interactions may be fundamentally distinct kinds of experiences (hitting someone vs. calling a teacher by her first name; Turiel, 1983). Domain theorists posit that events can be categorized as moral, conventional, personal, or prudential. They also acknowledge that some events and situations involve multifaceted issues.

Intrinsic to events in the moral domain are issues of fairness, justice, and harm. For example, a girl who pushes a boy off of a swing and makes him cry because she wants to swing knows by virtue of perceiving the consequences to the victim (physical harm and crying) that her behavior was morally wrong. Events that fall in the conventional domain may also be construed as wrong but not on moral grounds. They are wrong because they violate a norm that has been determined by fiat through generally agreed upon standards. Events that fall in the personal issues domain include the types of

clothes one chooses to wear, matters of privacy, or the music to which one chooses to listen. Events that fall in the prudential domain involve issues bearing on how people treat themselves, such as choosing healthy behaviors or harming one's self. Events that are multifaceted include issues that combine concerns (Smetana, Tasopoulos-Chan, Tasopoulos-Chan, Gettman, & Campione-Barr, 2009).

The Social Domain Theory approach meets criterion 1 (a clear and theoretically justified case for why and how events would differ). Indeed, Turiel (1983) presents a compelling argument suggesting that there may be consensus regarding the types of events that fall in the moral domain. Similarly, Gray, Young, and Waytz (2012) argue that the morality vs. immorality of an act is determined by whether or not harm was visited upon a moral patient (one who can experience suffering) by an intentional agent (one who seeks to cause harm). Gray and colleagues argue that via this dyadic "universal cognitive template," all typically functioning adults could agree on whether an act lies within the moral domain or outside of the moral domain. From this framework, people may share an essential understanding of what types of events are moral, but this theory has little to say about the negative implications for the self (threats to adaptive functioning) for events that fall outside of the moral domain.

For the current studies, using theories that divide events on moral grounds is problematic given criterion 2 (events correspond to specific threats). For Domain Theory, this is because events that fall within a given domain may be broad in their features, and consequently may not be linked to specific types threats for the moral agent (the individual causing the harm). For example, negative events in the personal domain could make one feel either overly influenced by others (such as when parents dictate clothing

choices to adolescents), lonely and isolated (such as when a good friend criticizes the music one listens to), or both, depending on the exact details of the event.

There is also a potential problem for criterion 3 (consensus among people). Research indicates that there is variability between people in assignment of domain to social issues depending on informational assumptions (Wainryb, 1991), ideological beliefs (Smetana,1981), and age (Smetana,1988). Likewise, some work on moral intuitions theory suggests people may disagree about the moral vs. immoral nature of events in terms of basic moral concepts (Haidt & Hersh, 2001), and even Gray and colleagues (2012) present evidence suggesting that individual differences in perceiving the minds of others (as agents and patients of harm) may lead to individual differences in moral judgments.

The Personality of Situations Approach

In creating a "personality of situations approach," Funder and colleagues argue that if we knew the psychologically relevant details of the situation and the psychological profile of an individual in the situation, we would be able to predict that person's behavior in that situation (Funder, 2008). Focusing on understanding differences between situations, Funder and colleagues conceptualize the "personality of situations" as researchers have conceptualized descriptive personality attributes. They use the Riverside Situational Q-Sort technique (Wagerman & Funder, 2009) to obtain aggregated ratings of the relevance of the psychological characteristics associated with particular situations. Situations are differentiated in terms of the expression of personality characteristics they create (Wagerman & Funder, 2009).

Funder and colleagues find that some situations that map onto personality characteristics give rise to distinct forms of affect. Thus, some negative events may threaten emotional well-being differently than others. Otherwise, this approach tells us little about the threats inherent in different events. Beyond learning the degree to which different events can be characterized by negative emotional experiences, which may fit criterion 2 (events corresponding to certain threats), this approach does not readily meet criterion 1 (divides negative events clearly) or criterion 3 (consensus among people). Although this may be a very fruitful approach for creating taxonomy of situations, it is not as helpful for tying specific events to specific threats.

The Approach That Appears to Meet All Three Criteria: Self-Determination Theory

Self-determination theorists posit three psychological needs: autonomy, competence, and relatedness. These needs are argued to be universal, innate requirements for human functioning (Deci & Ryan, 2000). When they are met, people are expected to function more adaptively than when they are not met. Thus, in functional terms, the three psychological needs are conceptualized as "qualities of experience that are essential to any person's well-being…that replenish psychological energy" (Sheldon, Ryan, & Reis, 1996, p. 1277).

Autonomy refers to feeling that one's actions flow from the self and are intrinsically and volitionally determined. Because past research suggests that fulfilling the need for competence can contribute to feeling autonomous (e.g., Ryan, 1995), we only focus on the relatedness and competence dimensions of negative events below.

Thus, autonomy is not discussed further. Relatedness refers to the extent to which one feels meaningfully connected to others, including a sense that others recognize and value one's authentic self. Competence refers to perceiving one's self as effective, capable, and as able to consistently bring about desired outcomes through one's own actions. Different negative events may create distinct types of threats if they foreground relatedness or competence needs. That is, people's basic psychological needs may contextualize events by creating the potential for certain kinds of threats as opposed to other kinds of threats. Moreover, negative relatedness foregrounding events may broadly threaten communion-related forms of adaptive functioning (e.g., feeling important others are included in the self). Negative competence foregrounding events may broadly threaten agency-related forms of adaptive functioning (e.g., sense of self-efficacy). This line of reasoning is supported by research which indicates that whereas fulfillment of the need for relatedness is associated with better relational functioning (e.g., less loneliness and social isolation), fulfillment of competence needs are not associated with better relational functioning (Patrick, Knee, Canavello, & Lonsbary, 2007). Indeed, by definition, negative relatedness-foregrounding events should present problems for feeling that one is meaningfully linked to others.

The need for competence broadly captures the extent to which people feel "optimally challenged in the domains of life one engages and thus is able to express effectiveness and agency" (Ryan & La Guardia, 2000, p. 163). Events that fulfill one's need for competence lead people to feel confident and effective in action (Ryan & Deci, 2002), whereas experiences that challenge competence are associated with lower perceived self-worth (Deci, Schwartz, Scheinman, & Ryan, 1981). When the need for

competence is frustrated, people are especially likely to feel helpless and unmotivated to achieve goals, suggesting a clear link to agency-related outcomes (Deci & Ryan, 2000). Thus, it may be the case that events that jeopardize one's sense of competence present problems for agency-related forms of adaptive functioning like a sense of efficacy, or the desire to re-engage in goal pursuit after setbacks.

Compared to the other possible ways of dividing events, self-determination theory appears to be the most useful framework for the current studies and it most clearly meets all three criteria noted above. Indeed, as Ryan and La Guardia (2000) explain, when the psychological needs are "frustrated or neglected in a specific domain or in general, individuals will show motivational or psychological decrements of a specifiable nature" (p. 150).

We expected that negative events that foregrounded relatedness vs. competence needs would be associated with challenges to specific forms of adaptive functioning. Compared to negative relatedness events, we expected that negative competence events would be associated with greater threats to the agency-related forms of adaptive functioning described above (perceived self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest and willingness, perceived choice, and internal locus of control).

Compared to negative competence events, we expected that negative relatedness events would be associated with greater threats to communion-related forms of adaptive functioning (empathy for others, greater loneliness, inclusion of important others in the self, perceived self-likeability, influence of others on self, and avoidance motivation).

Actor vs. Target

In addition to basic needs, another essential dimension that events may differ on is whether one was the actor who did or said something that contributed to the event turning negative, or was the target of such an act (much of that work focuses on experiences of causing harm or being harmed). Notably, being a bystander is another category in this dimension of perspective on event, but it is not considered in the proposed study. This is because the narrative literature focuses heavily on personally experienced events. Although bystander events could be viewed as such, they are not typically an explicit focus in narrative work.

Research on the agent/target perspectives suggests that they are more relevant, critical features of events in regards to potential implications for discerning threats. However, future research may examine the bystander perspective in the context of specific threats. Thus, the basic agent/target approach is reflected in the dyadic cognitive template on moral judgments described by Gray and colleagues (2012). Other work examining how people narrate perpetration and victimization suggests that negative events differ when one is the actor vs. target.

Researchers have found that in general, people tell different kinds of stories about their own perpetration and victimization events by highlighting different kinds of information (Baumeister, Stillwell, & Wotman, 1990; Stillwell & Baumeister 1997; Wainryb, Brehl, & Matwin, 2005). This raises the possibility that events are perceived differently if one is in the actor vs. target role. In turn, that suggests that there may be specific types of threats related to being an actor vs. being the target.

Perpetrators of harm (those in the actor role) highlight information that makes

them appear to be reasonable social agents. In a study with adults, 52% of perpetrator narratives featured a positive end to a story about harming someone else whereas only 29% of victim narratives did. Likewise, 68% of perpetrator narratives included information about external or mitigating circumstances whereas only 20% of victimization narratives did (Baumeister et al., 1990). Perpetrators tell stories that have a dual perspective, which includes a high degree of information about their own intentions as well as the emotions they perceive that the victim experienced (Wainryb et al., 2005).

Although perpetrators may be motivated to include this information in narratives to make themselves look reasonable (Baumeister et al., 1990; Stillwell & Baumeister, 1997), they may also include it because the dual perspective is a unique feature of causing harm (Wainryb et al., 2005). For example, one's intentions may be relevant features of a perpetration experience because whether one intended to cause harm vs. did not intend to cause harm will matter for how that individual experiences and makes sense of his or her own actions and the consequences for the victim. Indeed, seeing someone else hurting because of something one has done is disturbing and is a definitional piece of causing harm.

Thus, when one's actions lead to harm, it makes sense that intentions are the focus of the narrative because they were central to the experience. When victims talk about being harmed by someone else, they focus on the internal experience of being harmed rather than focusing on the psychological states of the perpetrator. In contrast to being the actor who causes someone else harm, being the victim appears to generate a more unified perspective on the event.

The difference in event characteristics associated with being the actor or target

could lead to distinct types of threats to adaptive functioning. Research on the actor/target dimension in experiences of interpersonal harm suggests that role in the event may be associated with different kinds of threats. People's memories of perpetrating harm are characterized by shame and guilt whereas their memories of being victims of harm are characterized by anger, anxiety, sadness, and fear (Mansfield, McLean, & Lilgendahl, 2010). Hence, events in which one's own actions caused the harm are associated with a different emotional profile than events in which one was the target of harm. The different emotional profiles may suggest unique psychological threats related to causing harm and being harmed.

For example, shame is associated with negative judgments about the self and social withdrawal (Tangney, Stuewig, & Mashek, 2007). Experiencing shame may suggest that one has "over-identified" with causing harm and views the self as bad or damaged in some lasting way (Lilgendahl, McLean, & Mansfield, 2013) and that may be maladaptive. Being the actor in such negative events may make it especially challenging to want to be psychologically minded about one's actions and grapple with the meaning of the negative event, especially if the event is linked to shame. Such events could threaten positive self-regard and lead one to feel inauthentic or alienated from the true self.

Being the target of interpersonal harm may result in other distinct challenges to adaptive functioning. In one study regarding how people narrate traumatic events, approximately half (47.7%) of the victim narratives included statements about how the event led to the self being damaged in some lasting way (Lilgendahl et al., 2013). Janoff-Bulman noted that one consequence of victimization is a global sense that the universe is

unjust and unkind (1985). That sense that the world or others are unjust may make it challenging to empathize with others. Furthermore, given that the negative target event was unsought, yet went unavoided, it may threaten a person's sense of being able to control events. It is possible that this notion feeds the anxiety feature of victimization events. Thus, unlike negative events in which one was the actor, negative events in which one was the target may undermine a sense that one has control over life outcomes, may give rise to feeling like others have an undue influence on the self, and may be associated with diminished empathy for others.

We expected that negative events in which one is the actor vs. the target might be associated with challenges to different forms of adaptive functioning. Compared to negative target events, we anticipated that negative actor events would be associated with challenges to positive self-evaluation (like self-efficacy), would undermine psychological mindedness-interest and psychological mindedness-willingness, would be associated with greater self-alienation, and a diminished desire to re-engage with new goals.

Compared to negative actor events, we expected that negative target events may threaten one's sense of being able to control outcomes in life, make one feel unduly under the influence of others, and would be associated with greater threats to empathy for others.

Implications of Role Being Crossed With Foregrounded Needs

Crossing the Actor/Target dimension with Competence/Relatedness dimension leads to four negative events: 1) Actor/Competence – a time one did something to harm

his or her sense of competence, 2) Target/Competence – a time someone else did something to harm one's sense of competence, 3) Actor/Relatedness – a time one did something to harm an important relationship, 4) Target/Relatedness – a time someone else did something to harm an important relationship.

These four types of events may differ in the extent to which they create threats to adaptive functioning. Actor/competence events may be associated with higher levels of threats to self-efficacy than the other three events. Actor/competence events may be challenging for people in the sense that they may lead one to feel responsible for failing at an achievement-oriented goal. Actor/competence events may be more challenging to one's sense of efficacy than target/competence events because in target competence events, it is possible that one may still retain some sense that he or she can accomplish the goal despite what the other individual claims about the self. Actor/competence events may be more strongly threatening to self-efficacy than actor/relatedness or target/relatedness events because relatedness events, which inherently involve the interaction of one's own goals, desires, and needs with the goals, desires, and needs of another, may not be perceived as being as much under one's own control as competence-related events. Competence events may be viewed as particularly tied to one's personal skills and abilities that can be practiced and developed.

Being the target of a negative relatedness event may be associated with greater loneliness than the other three events. Negative events in the relatedness domain should be especially likely to be linked to feelings of social isolation. Because being the target in such an event may lead people to feel strongly rejected or unable to change the situation, target/relatedness events may be more likely than actor/relatedness events to create a

sense of loneliness. Further, target/relatedness events should be more linked to loneliness than either actor/competence or target/competence events because competence events may be more about mastery and achievement in vocational domains than closeness to others.

The Role of Individual Differences in Determining Threats

The stress and coping approach to negative life events suggests that threats arise (or fail to) when an individual appraises the extent to which his or her own personal characteristics can meet the demands of the event. Lazarus and Folkman (1987) argue that threat is "not solely a property of the person or the environment; it requires the conjunction of an environment having certain attributes with a particular kind of person who will react with threat when exposed to the environmental attributes. The concept of threat actually loses its meaning when applied to an environment without regard to the person who transacts with it…" (p. 142). Consequently, in the current studies, we deemed it important to examine the extent to which individual differences relate to perceived event threats. This approach also speaks to calls in the "post person-situation debate" era of personality psychology to account for "which aspects of person's and which aspects of situations (specifically) affect which behaviors" (Funder, 2008, p. 577).

Psychological well-being and emotional stability may be two individual differences that are especially relevant for the extent to which individuals perceive threats to adaptive functioning. Psychological well-being (Ryff, 1989) assesses people's sense of leading a meaningful and pleasurable life. As a resource that may support overall

functioning, high (versus low) well-being may protect people from feeling threatened by negative life events. We have found that individuals who scored high on psychological well-being are more likely to narrate growth-promoting stories of interpersonal transgressions than individuals who scored low on well-being (Mansfield, Pasupathi & McLean, 2015). One explanation of this finding is that well-being may create a cognitive/emotional framework that makes it less threatening for individuals to reflect on such negative events.

Individual differences in emotional stability may also matter for perceived threat. More emotionally stable people (low neuroticism) are at decreased risk for a variety of negative psychological outcomes. They report experiencing fewer daily stressors, fewer negative outcomes from the stressors they do experience, and less contamination of mood from past negative events (Suls & Martin, 2005). Indeed, whereas high emotional stability may be protective against a variety of threats to self from negative events, low emotional stability, which is characterized by a preponderance of negative emotionality and negative cognitions about life events, could predispose people to perceiving high levels of threats from negative life events. In support of this idea, researchers have shown that even controlling for average valence of the events selected to be told in one's life story, people who scored low on emotional stability (high neuroticism) were less likely to positively interpret the impact of life events on self (Lilgendahl & McAdams, 2011). Generally, psychological well-being and emotional stability are positively correlated (negatively if emotional stability is conceptualized as neuroticism). Conceptually, they are distinct.

Whereas psychological well-being (a measure of eudaimonic functioning; Ryff &

Singer, 2008) taps the extent to which people conceive of their lives as being fulfilling, pleasurable, associated with growth, purpose, and mastery over the environment, emotional stability centers around the extent to which people are consistent in an overall positive, optimistic mindset vs. an overall negative, pessimistic mindset. Because of these conceptual differences, we plan to keep the constructs distinct in analyses though the ultimate decision will depend on the extent of the correlations in the samples.

Recall that the current studies seek to determine the extent to which distinct negative events (e.g., being the actor in a negative relatedness foregrounding event as opposed to being the target in a negative competence foregrounding event) map on to particular kinds of bad outcomes, which we refer to as adaptive functioning threats. The primary question addressed whether most people agree that different kinds of bad events lead to different kinds of adaptive functioning threats. If so, meaning-making may be most beneficial when it addresses event-specific threats.

CHAPTER 2

STUDY 1

We used a 2 (actor, target) by 2 (competence, relatedness) design to elicit memories of 4 event types: 1) actor/competence, 2) target/competence, 3) actor/relatedness, and 4) target/relatedness. After thinking of each event, participants responded to a battery of adaptive functioning measures expected to broadly map on to agency-related and communion-related variables that we reviewed earlier. This design allowed us to assess whether events in which one was the actor vs. target and that foregrounded either the basic psychological need for competence or relatedness were associated with particular types of adaptive functioning threats.

Hypotheses

Main Effects of Foregrounded Psychological Needs (Competence/Relatedness) on Adaptive Functioning

We anticipated that there would be more challenges to self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, having an internal locus of control, and perceived choice in negative competence events than negative relatedness events. We anticipated that there

would be greater challenges to empathy for others, greater sense of loneliness, greater challenges to inclusion of others in self, perceived self-likeability, influence of others on self, and avoidance motivation in negative relatedness events than negative competence events.

Main Effects of Role (Actor/Target) on Adaptive Functioning

We anticipated that there would be more challenges to self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, and perceived likeability in negative actor events than negative target events.

We anticipated that there would be more challenges to perceived choice, locus of control, empathy for others, greater loneliness, greater influence of others on self, and avoidance motivation in negative target events than negative actor events.

Interactions of Foregrounded Psychological Need (Competence/Relatedness) and Role (Actor/Target) on Adaptive Functioning

We anticipated that actor/competence events would be associated with higher levels of threats to self-efficacy than the other three events. We expected this because of the agentic, goal-oriented nature of competence events and the fact that being in the actor role may be associated with people being likely to perceive the self as a "failure." We anticipated that target/relatedness events would be associated with higher loneliness than the other events. We expected this because negative events in the relatedness domain may be especially likely to be linked to feelings of social isolation and because being the

target in such an event may lead people to feel especially rejected.

Main Effect of Well-Being and Emotional Stability on Threats to Adaptive Functioning

We expected that individuals who scored high on well-being and emotional stability would report the lowest threats to adaptive functioning across the four negative events because of the potentially protective nature of well-being and emotional stability.

Method

Participants

Undergraduates (n = 183) from the psychology participant pool at the University of Utah participated for 1.5 hours of course credit. Four participants were dropped from the sample for not completing large portions of the data (see Appendix A for information about sample and data preparation). We examined the remaining 179 participants' responses to three memory anchors for each of the four events in order to determine whether participants nominated an event that matched the prompt. For example, when prompted for actor/competence, we examined the anchor items to assess whether the participant caused the negative event and whether the negative event would have foregrounded the psychological need for competence. Of 179 participants, 125 provided anchors that matched all prompted events and 54 failed to provide anchors that matched at least one prompted event (see results section on manipulation check for further details). In the final sample, we included only those 125 who provided anchors that matched all memory prompts.

The final 125 participants did not differ from the other 54 participants on conscientiousness $t(177) = -.12$, $p = .91$, neuroticism $t(177) = -.12$, $p = .90$, openness to experience $t(177) = .54$, $p = .59$, extraversion $t(177) = .74$, $p = .46$, agreeableness $t(177) = -.59$, $p = .55$, trait hostility $t(177) = .60$, $p = .55$, or psychological well-being $t(177) = -.84$, $p = .40$.

Reducing sample size creates costs in terms of our power to detect statistically significant effects. To determine our achieved power given our reduction in sample size to 125 participants, we conducted post hoc analyses for repeated measures MANOVA using G*power 3.0 (Erdfelder, Faul, & Buchner, 1996), given an alpha of .05. We estimated effects using the *F* test family. Our analyses indicated that when testing within-subjects effects on our dependent variables, we had power of .98 to detect a Cohen's f^2 effect size of .02, which is a small effect size according to Cohen (1988). When we estimated power to detect between-subjects effects (e.g., testing whether men and women differed on types of threats by events) in our repeated measures design, our power to detect the same small effect (Cohen's $f^2 = .02$) was reduced to .56. In sum, it is unlikely that we will miss an effect if it is present when we test within-subjects effects but more likely when examining between-subjects effects for factors like gender that have two levels.

The final sample of 125 participants (female = 84) had an average age of 22.46 ($SD = 4.10$). Of those participants, 0.8% reported being African American, 8.8% Asian American, 50.4% European American, 8.0 % Latino American, 1.6% chose not to disclose, 20.8% chose Other as their ethnicity, and 9.6% chose multiple ethnicities.

Procedure

Overview of Online Survey

The study was listed in an online system for signing up for course credits at the University of Utah. Potential participants read the following description of the study online:

> *This study examines how different types of negative events relate to different types of challenges. The results of this study will advance our understanding of what stressors are linked to what types of experiences. We are doing this study because knowing this information will help us understand why some forms of coping work for some types of negative events but not others. You will be asked to think about and report on how different types of difficult experiences made you think and feel.*

Those who were interested in participating then clicked a link to the survey. The survey was presented in 7 major blocks. Block 1 of the survey included completion of consent, demographics, and individual differences questionnaires.

As part of consent (see Appendix B), participants were informed that the survey would require approximately 1.5 hours to complete, that participation was voluntary, and that choosing not to finish the survey or omitting any question that the person preferred not to answer would not result in penalty or loss of benefit. Participants consented by clicking the next button on the survey after reading the following:

> *By clicking next below and returning this questionnaire, you are giving your consent to participate... If you don't want to participate simply log out and close your browser. Thank you very much!*

When participants clicked next, they were taken to a demographics page in which we collected age, gender, and information about ethnicity. Then participants completed individual differences measures (the Big Five Inventory, Trait Hostility, and Psychological Well-being, as described in Measures), which we presented in random order.

In Blocks 2, 3, 4, and 5 of the study, participants were prompted to recall four different negative life events (actor/competence, target/competence, actor/relatedness, target/relatedness, see Appendix C for prompts). They were asked to spend 2 minutes vividly imagining those events and to respond to questions about those events after the 2-minute period (described in detail below). Then before moving on to the next block, participants engaged in a between-event filler task. Participants were asked to choose which of 4 pictures he or she considered the most 1) pleasant, 2) peaceful, 3) exciting, 4) interesting, and 5) mysterious. The photos were drawn from emotionally neutral pictures in the International Affective Picture Scale. We chose those pictures as an attempt to return participants to an emotionally neutral state after having thought about each negative event to reduce the potential for carryover effects. After completing the final picture ratings, in Block 6, participants were prompted to write narratives of the negative events (event order was again randomized). After completing the final narrative in Block 7, participants were debriefed.

Example Survey Walkthrough

After completing Block 1, participants were randomly assigned to recall one of the four negative events. The example that follows is based on the participant being

prompted to recall an actor/competence event. The prompt would have appeared as follows:

> *Now I want you to think of a time when you did or said something that negatively affected your sense of competence in an area that is important to you. I want you think of a time when it was your own actions that led to this outcome.*

The participant would have then been asked to provide some details about that event to anchor his or her memory:

1. Now please briefly state when it happened (the approximate date if you can recall it).
2. Now please briefly state who was involved.
3. Now please briefly state what you did in this event.

Responses to items 1 and 2 were limited to 75 characters. Responses to item 3 were limited to 200 characters. Length of response was limited to exclude the possibility that some participants would provide a lengthy narrative of the event, whereas others would not. After completing item 3 (briefly stating what the participant did in the event), the participant clicked "next" and saw the following prompt:

> *Now spend TWO minutes imagining that you are back in the most intense moment of that event. Just stay in that moment for a while and vividly imagine that experience again. After two minutes pass you will be able click next and move past this page to the next page of the survey.*

The Qualtrics survey was designed such that participants could not advance their browsers to the next page of the survey until 2 minutes had passed. This 2-minute period

was included to standardize the amount of time that all participants spent imagining the prompted events.

Participants then completed two items as a manipulation check. One item assessed the degree to which the participant perceived of the self as incompetent after imagining the event. The other assessed the degree to which the participant perceived him or her self as lacking social relatedness after imagining the event (see Measures). We anticipated that if participants had been imagining a negative, competence foregrounding event, they would score higher on the competence measure than the relatedness measure. In contrast, we expected that when participants had been imagining a negative, relatedness foregrounding event, they would score higher on the relatedness measure than the competence measure.

Next, using a 1 (not at all) to 5 (extremely) Likert-type scale, the participant reported the degree to which he or she experienced six different negative emotions after imagining the event (see Measures). Using the same scale, participants then responded to one item assessing the extent to which it was difficult for him or her to vividly imagine the event and one item assessing how much effort he or she put forth imagining the event (see Measures). We gathered these measures to explore whether the events systematically differed in difficulty and effort required to imagine them.

Next, using a 1 (not at all true) to 5 (completely true) Likert-type scale, the participant reported on the extent to which imagining the first event, in this example actor/competence, made him or her feel threatened on 14 different forms of adaptive functioning. The order of presentation of adaptive functioning scales was randomized. Each adaptive functioning scale was calculated such that higher scores represented

greater levels of threat.

After the participant responded to the final adaptive functioning measure, the participant completed the picture rating filler task. Once done with the filler task, the participant moved on to the second (randomly assigned) negative event prompt and the steps in the example above were repeated. Participants followed those same steps in recalling the third and fourth events. After the fourth event, the participant was asked to provide narratives of the events (event presentation was randomized, see Appendix D for narrative prompts). After the final narrative, the participant clicked "next" and saw a debriefing page describing the goals of the study. See Appendix E for a complete list of measures and the overall number of measures included in the Study 1 survey.

Measures

We used the Psychological Well-being (Ryff, 1989), which is a widely used, Likert-type measure that has good test-retest reliability and displays convergent validity with measures like internal control, self-esteem, and life satisfaction, and positive and negative affectivity (Ryff, 1989). Participants provided responses on a 1 (strongly disagree) - 6 (strongly agree) scale that measures six dimensions of psychological well-being. Examples from the subscales include, "In general, I feel confident and positive about myself" (self-acceptance); "In general, I feel that I continue to learn more about myself as time goes by" (personal growth); "I feel good when I think of what I've done in the past and what I hope to do in the future" (purpose in life); "Most people see me as loving and affectionate" (positive relations with others); "My decisions are not usually influenced by what everyone else is doing" (autonomy); and "In general, I feel I am in

charge of the situation in which I live" (environmental mastery). Internal consistency of the subscales were high in the current study, self-acceptance, $\alpha = .85$; personal growth, $\alpha = .80$; purpose in life, $\alpha = .81$; positive relations with others, $\alpha = .85$; autonomy, $\alpha = .80$; environmental mastery, $\alpha = .82$; and at the overall level, $\alpha = .94$.

To assess personality, we used the Big Five Inventory (John & Srivastava, 1999). The Big Five Inventory is a 44-item self-report measure of individuals' standings on five dimensions of personality: extraversion, agreeableness, conscientiousness, openness to experience, and neuroticism. The Big Five Inventory displays desirable psychometric properties (including good internal consistency of subscales and the test-retest reliability of the subscales equals or is greater than .80 over 3 months). For each of the 44 test items, participants provide responses on a 1 (strongly disagree) to 5 (strongly agree) Likert-type scale of the extent to which the characteristic describes himself or herself. Example items include the following: "Is Talkative" (extraversion); "Is helpful and unselfish with others" (agreeableness); "Does a thorough job" (conscientiousness); "Is depressed, blue" (neuroticism); and "Is original, comes up with new ideas" (openness to experience). Internal consistency of the subscales were adequate in the current study, extraversion, $\alpha = .85$; agreeableness, $\alpha = .80$; conscientiousness, $\alpha = 78$; neuroticism, $\alpha = .84$, and openness to Experience, $\alpha = .82$.

Participants then completed Likert-type self-report questionnaire ratings assessing a variety of distinct forms of adaptive functioning after thinking about four different negative events. Below we list and describe the measures as they were introduced earlier in broad conjunction with their relationships to agency and communion. Each scale listed was limited to the three items that displayed the highest factor loadings in the scale

overall and that made the most sense for the current study.

Recall that the current study assesses the extent to which events that differ on role (actor/target) and foregrounded psychological need (competence/relatedness) threaten distinct forms of adaptive functioning. Note, however, that some of these "adaptive functioning" measures that we used (our dependent variables) focused on positive psychological characteristics (e.g., perceived likeability of self) whereas others focused on negative psychological outcomes or experiences (e.g., degree of loneliness). Scales that focused on positive psychological characteristics were reverse scored. Consequently, higher scores on all scales represented higher magnitude of threat to adaptive functioning. For example, high scores on perceived likeability of self represent greater threats to perceived likeability of self. Alpha values presented below are for participants' responses to each scale after thinking about the actor/competence, target/competence, actor/relatedness, target/relatedness events, respectively.

We used the Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) to assess perceived efficacy. This widely used scale assesses the degree to which people are confident in their ability to face difficulty after experiencing stressful events. The three items used from this scale were (α = .89, .89, .89, .89):

1. "After thinking about this event, I realize that I can manage to solve difficult problems if I try hard enough."
2. "After thinking about this event, I realize that it is easy for me to stick to my aims and accomplish my goals."
3. "After thinking about this event, I realize that I am confident that I could deal efficiently with unexpected events."

We used the Goal Re-engagement Scale (see Wrosch, Scheier, Miller, Schulz, & Carver, 2003) to assess the extent to which when faced with the knowledge that a sought after goal is unattainable, individuals are able to define a new meaningful goal and take actions to meet it. The three items from this scale we used were (α = .92, .92, .94, .93):

1. "After thinking about this event, I can convince myself that I have other meaningful goals to pursue."
2. "After thinking about this event, I realize it is easy for me to start working on other new goals."
3. "After thinking about this event, it is then easy for me to seek other meaningful goals."

We used the Self-Alienation subscale of The Authenticity Scale (see Wood, Linly, Maltby, Baliousis, & Joseph, 2008) to measure perceived dispositional authenticity. The three items from the self-alienation scale were (α = .89, .89, .92, .90):

1. "After thinking about this event, I feel as if I don't know myself very well."
2. "After thinking about this event, I feel out of touch with the real me."
3. "After thinking about this event, I feel alienated from myself."

We used the Psychological Mindedness-Interest in Meaning and Motivation for One's Own and Other's Behavior scale (see Conte, Rasson, & Karusa, 1996) to assess the extent to which individuals show a willingness, interest in, and capacity to reflect on the meanings of affective and intellectual psychological processes. In factor analytic work, Conte et al. (1996) found that the scale was composed of five related but unique factors. We chose the following single item from the Psychological Mindedness-Interest subscale, which assesses the extent to which people are curious about understanding their

own and others' behavior:

1. "After thinking about this event, I tend to wonder what made me act in a certain way."

We used one item from the Psychological Mindedness-Willingness to Try to Understand One's Self and Others (see Conte, Rasson, & Karusa, 1996) Scale. We chose the single item with the highest factor loading from the Psychological Mindedness-Willingness subscale, which assesses the extent to which people are willing to engage in psychologically minded thought in order to understand their own and others' behavior:

1. "After thinking about this event, I realize that I don't want to delve too deeply into my feelings."

We used three items from the Perceived Choice (see Sheldon & Deci, 1996) scale to assess the extent to which people feel that they function in a self-determined, autonomous way. The perceived choice subscale assess the extent to which people feel that they have control and "choicefulness" over their actions (Sheldon, Ryan & Reyes, 1996, p. 1273). The three items we used were (α = .85, .86, .85, .86):

1. "After thinking about this event, I realize I always choose the things I do."
2. "After thinking about this event, I realize that I choose to do the things that I have to do."
3. "After thinking about this event, I realize that I choose to do the things I do because they interest me."

We used three items from the Multidimensional Locus of Control – Internal subscale (Levenson, 1981) to assess the extent to which people expect that their own characteristics and actions (as opposed to external factors fate, and powerful others) will

lead to desired outcomes. The three items used from the Internal Locus of Control subscale were (α = .80, .83, .83, .86):

1. "After thinking about this event, I realize that I can pretty much determine what will happen in my life."
2. "After thinking about this event, I realize that I am usually able to protect my personal interests."
3. "After thinking about this event, I realize that when I make plans, I am almost certain to make them work."

We used three items from the Perspective Taking subscale of the Interpersonal Reactivity Index (see Davis, 1980). The Interpersonal Reactivity Index (IRI) is a multidimensional measure of individual differences in the construct empathy. The IRI has four subscales. We used the perspective taking subscale of the IRI, which assess "spontaneous attempts to adopt the perspectives of other people and see things from their point (sic) of view" (Davis, 1980, p. 2). The three items we used were (α = .91, .92, .91, .90):

1. "After thinking about this event, I realize that there are two sides to every question and I tend to try to look at them both."
2. "After thinking about this event, I realize that when I'm upset at someone, I usually try to 'put myself in his/her shoes' for a while."
3. "After thinking about this event, I realize that before criticizing somebody, I try to imagine how I would feel if I were in his/her place."

We used three items from the UCLA Loneliness Scale (see Russell, Pepleau, & Ferguson, 1978) to assess the extent to which individuals feel a subjective sense of

loneliness and social isolation. The three items from the scale we used were (α = .90, .89, 91, .91):

1. "After thinking about this event, I realize that I lack companionship."
2. "After thinking about this event, I realize that I am no longer close to anyone."
3. "After thinking about this event, I feel isolated from important others."

We used the Inclusion of Others in Self Scale (IOSS, see Aron, Aron, & Smollan, 1992) to assess perceived interpersonal connectedness. Participants were asked to think of a relationship and to choose one of seven Venn diagram pictures. In these pictures, two circles represent the two individuals in the relationship and range from less to greater overlap. In Block 1 of the current study, in a text box, participants were asked to enter the initials of the "person that he or she feels closest to." Those initials, entered in Block 1, were linked to the IOSS instructions later in the survey. The wording of the IOSS instructions was slightly varied to reflect each of the four events. However, each of the four times participants were asked to respond to the IOSS, they were presented with the initials of the person that the participant said he or she felt closest to in Block 1. The IOSS prompts read as follows:

1. Actor/Competence Event – "Thinking about the time that you did or said something that negatively affected your sense of competence, which of the following pictures best illustrates how you feel about (initials from block 1)?"
2. Actor/Relatedness Event – "Thinking about the time that you did or said something that negatively affected a relationship that was important to you, which of the following pictures best illustrates how you feel about (initials from block 1)?"

3. Target/Competence – "Thinking about the time that someone close to you did or said something that negatively affected your sense of competence, which of the following pictures best illustrates how you feel about (initials from block 1)?"
4. Target/Relatedness – "Thinking about the time that someone close to you did or said something that negatively affected a relationship that was important to you, which of the following pictures best illustrates how you feel about (initials from block 1)?"

We measured perceived likeability by adapting a measure from Snyder and Swann (1978). Snyder and Swann created 10, 6-point bipolar scales that participants used to rate the personal attributes of other individuals (e.g., friendly-unfriendly). Drawing on this approach, we asked participants to rate how likeable he or she perceives the self to be using a 1 (Very Unlikeable) to 5 (Very Likeable) continuous Likert-type scale.

We assessed people's perceptions of being influence by powerful others with three items from the Influence of others Authenticity Scale (Wood, Linly, Maltby, Baliousis, & Joseph, 2008). Items in this scale assess the extent to which people feel the authentic self is constrained by the influence of others. The three items from the Influence of Others scale were (α = .87, .84, .85, .86):

1. "After thinking about this event, I realize I usually do what other people tell me to do."
2. "After thinking about this event, I realize that other people influence me greatly."
3. "After thinking about this event, I realize that I am strongly influenced by the opinions of others."

We used three items from the Avoidance Motivation subscale of the Transgression

Related Interpersonal Motivation Scale (see McCullough et al., 1998; McCullough, Root, & Cohen, 2006) to assess the extent to which individuals feel motivated to avoid contact with someone who has harmed him or her in the past. The three items we chose were (α = .91, .89, .91, .91):

1. "After thinking about this event, I realize I want to avoid those who have harmed me."
2. "After thinking about this event, I realize that I keep as much distance between me and those who have hurt me as I can."
3. "After thinking about this event, I realize that I live as if those who have hurt me don't exist."

As a manipulation check, we used two items, adapted from the Basic Needs General questionnaire (see Deci, Ryan, Gagne', Leone, Usinov, & Kormazheva, 2001), to assess the extent to which participants recalled an event consistent with each prompted event (i.e., a negative competence foregrounding event for actor/competence and target/competence). Participants responded on a 1 (not at all true) to 5 (completely true) Likert-type scale to the following items:

1. "After thinking about this event, I realize I am not always competent."
2. "After thinking about this event, I realize that I get along with the people in my life (reversed)."

We then assessed the degree of difficulty and effort participants reported putting forth to imagine the negative events. For each negative event prompted, participants responded on a 1(not at all) to 5 (extremely) Likert-type scale to one item assessing the extent to which it was difficult for him or her to vividly imagine the event and one item

assessing how much effort he or she put forth imagining the event:

1. "How much difficulty did you have vividly imagining this event again?"
2. "How much effort would you say you put forth to imagine the experience again?"

We gathered other individual differences measures. For example, we collected scores on Trait Hostility (Buss & Perry, 1992) to compare participants who were dropped from the study to those who were retained. We wanted to confirm that participants kept for analyses did not differ from those who were dropped on trait hostility, a construct that assesses aggression. The trait hostility subscale has been shown to have desirable psychometric properties. For example, the measure is internally consistent and displays good test-retest reliability (Buss & Perry, 1992). Trait hostility also displays construct (convergent and discriminant) validity. For example, scores on hostility are significantly and positively associated with measures of emotionality but significantly negatively associated with self-esteem (Buss & Perry, 1992). The 8-item measure used in the current study (e.g., "When people are especially nice I wonder what they want.") displayed good internal consistency, $\alpha = .84$.

We also collected scores on Subjective Vitality (see Ryan & Frederick, 1997). The Subjective Vitality Scale is a 7-item measure of the extent to which one feels vital and energetic in one's life. We chose the following items from the scale:

1. "After thinking about this event, I feel alive and vital."
2. "After thinking about this event, I don't feel very energetic."
3. "After thinking about this event, I nearly always feel alert and awake."

The scale did not display desirable internal consistency across the four events (actor/competence, target/competence; actor/relatedness; target/relatedness, respectively,

α = .65, .64, .48, .58). As a consequence, subjective vitality was not included in the analyses presented later.

Participants also rated the extent to which he or she felt angry, guilty, ashamed, sad, afraid, and anxious using a 1 (not at all) to 5 (extremely) Likert-type scale after imagining each negative event. We do not report emotional responses here.

Results

Miscellaneous Analyses: Manipulation Check and Degree of Effort and Difficulty Required

All general linear model analyses reported in the results section use Pillai's trace unless otherwise stated. As a manipulation check, we tested whether competence and relatedness foregrounding events were associated with different patterns of means on the single-item competence and relatedness questions from the Basic Needs General questionnaire (Deci et al., 2001). Recall that after participants spent 2 minutes thinking about each of the four prompted events, they were asked to respond on a 1 (not at all true) to 5 (completely true) scale to a question about competence from the Basic Needs General questionnaire ("After thinking about this event, I realize that I am not always competent.") and to a question about relatedness from the Basic Needs General questionnaire ("After thinking about this event, I realize that I get along with the people in my life.").

We expected a crossover interaction such that when individuals recalled a competence event, scores would be higher on the basic needs competence item than the relatedness item and when individuals recalled a relatedness event, scores would be

higher on the basic needs relatedness item than the competence item. We ran a repeated measures general linear model with item type (competence item vs. relatedness item), role (actor / target), and foregrounded psychological need (competence event vs. relatedness event) as within-subject's variables and scores on the two items from the Basic Needs General Questionnaire as dependent variables.

Unexpectedly, the multivariate tests revealed a nonsignificant item type by foregrounded psychological need interaction, F (1,119) = .27, p = .61. Pairwise comparisons revealed that after recalling relatedness events, participants had significantly higher scores ($p < .01$) on threats to basic needs relatedness threats (*EMM* = 3.34) than basic needs competence threats (*EMM* = 2.94). However, recalling competence events was associated with significantly higher scores ($p < .01$) on basic needs relatedness threats (*EMM* = 3.51) than basic needs competence threats (*EMM* = 3.05).

Recall that participants were asked to provide anchoring information about each event he or she was asked to recall. One of the anchors was a brief description about what the participant did in the event. Prior to analyzing data, the author and a trained research assistant examined each participant's responses to that question for all four event types as a second manipulation check. Responses to the anchor often illustrated who the actor / target was and the general domain of functioning (competence / relatedness). Thus, we used that item to give each participant an "incorrect" (0) or "correct" (1) score on nominating an event that fit with the prompted event type. Participants received scores of 1 when he or she was prompted for an actor event and he or she described an event in which he or she was the actor; when prompted for a target event and he or she described being a target; when prompted for a competence event and he or she nominated a

competence foregrounding event; and when he or she was prompted for a relatedness event, he or she nominated a relatedness foregrounding event. The research assistant and first author discussed and came to agreement about unclear or difficult to code responses to the anchoring item. For cases in which we could not use the brief anchoring description, we turned to the narrative for the full details of the event. Only those participants who nominated four events that matched all four prompted events were included in the final analyses.

To further understand differences among events, we conducted a general linear model to test whether there were differences in how much effort participants reported the events required to vividly imagine and how difficult participants reported the events were to vividly imagine. Role (actor/target) and foregrounded psychological need (competence/relatedness) were within-subject's independent variables. Degree of difficulty in vividly imagining and degree of effort required were dependent measures. There were no main effects of role, F (1,124) = .14, p = .71, or foregrounded psychological need F (1,124) = .55, p = .46, and no interaction of role by need on degree of difficulty in vividly imagining the event F (1,124) < .01, p = 1.00, nor were there main effects of role, F (1,123) = .68, p = .41 or foregrounded psychological need, F (1,123) =.34, p = .56, and no interaction of role by foregrounded psychological need on degree of effort required to vividly imagine the event, F (1,123) = .46, p = .50. The four events did not differ in degree of difficulty in vividly imagining them or in degree of effort required to vividly imagine them.

To determine the appropriateness of combining some of the threat type scales to reduce the number of tests of significance, I ran a principal components factor analysis

including all of the adaptive functioning measures with varimax rotation and component extraction for eigen values greater than 1. There were 13 components extracted with eigen values greater than 1 that appeared to generally correspond with the 13 adaptive functioning measures we assessed. Thus, the factor structure from the principle components analyses did not support reducing the number of scales by combining them. However, because scores on the perceived choice and locus of control scales were highly correlated for each event recalled (r's > .61, p's < .001), I chose to combine those scales (averaged participants' responses on the two items) into a single item called perceived control (a variable title that captures the wording of the six items from the perceived choice and locus of control scales). No other scales were so highly or consistently correlated across events, so no others were combined.

Primary Analyses

Correlations among the dependent variables were examined by event type for all analyses. In general, the dependent variables were weakly to moderately correlated, indicating that these data were suitable for testing with one general linear model as described below. Recall that higher scores on the dependent measures represent greater levels of threat. To test the hypothesized main effects and interactions, we ran a single general linear model in which role (actor/target) and foregrounded psychological need (competence/relatedness) were within-subjects independent variables. Participants' scores on 12 adaptive functioning measures, self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, perceived control (combination of internal locus of control and perceived choice),

empathy, loneliness, inclusion of others in self, perceived likeability, influence of others, and avoidance motivation, were included as repeated measures dependent variables. Multivariate tests of within-subjects effects revealed main effects of role, F (12, 96) = 7.07, $p < .001$, partial $\eta^2 = .47$, foregrounded psychological need, F (12, 96) = 2.63, $p < .01$, partial $\eta^2 = .25$, and a significant role by need interaction, F (12, 96) = 2.07, $p < .05$, partial $\eta^2 = .21$.

Subsequent to the main analyses above, we ran another GLM with gender and order as between-subject factors (with the same within-subjects independent variables and adaptive functioning dependent variables). We found no gender differences on mean levels of adaptive functioning, F (12, 93) = .96, $p = .49$, and no effect of order F (12, 93) = .78, $p = .67$. The results presented below were from the GLM analyses that did not include gender or order because there were no gender or order effects present.

Main Effects of Foregrounded Psychological Needs on Adaptive Functioning Measures

We followed up the multivariate main effect of foregrounded psychological need on adaptive functioning measures with univariate tests. See Table 1 for estimated marginal means associated with the significance tests reported below. We anticipated that self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, and perceived control would be more threatened by negative competence events than negative relatedness events. Univariate tests did not support that anticipated pattern of findings. There was no difference on threats to self-efficacy, F (1, 107) = 3.23, $p = .08$, goal re-engagement, F (1, 107) = .18, $p = .67$, or self-

Table 1. Test of Main Effects of Role and Foregrounded Psychological Need on Measures of Adaptive Functioning in Study 1 (Higher Values Represent Greater Threats).

Dependent Measures	Role		Psychological Need	
	Actor	Target	Competence	Relatedness
Gen. Self-eff.	2.82 (.10)**	2.57 (.10)**	2.64 (.10)	2.75 (.10)
Goal Re-engage.	2.43 (.10)	2.40 (.09)	2.40 (.10)	2.43 (.10)
Self-alienation	1.29 (.03)**	1.23 (.03)**	1.24 (.02)	1.28 (.03)
Psych. Minded Int.	3.23 (.10)**	2.61 (.10)**	2.77 (.10)**	3.07 (.10)**
Psych. Minded Will.	2.51 (.11)	2.43 (.10)	2.38 (.10)*	2.56 (.11)*
Perceived Con.	2.66 (.08)	2.73 (.08)	2.72 (.08)	2.67 (.09)
Empathy	2.74 (.10)**	3.01 (.10)**	2.92 (.10)	2.82 (.10)
Loneliness	1.32 (.03)	1.30 (.03)	1.27 (.03)**	1.35 (.03)**
IOSS	3.91 (.18)	3.85 (.18)	3.92 (.19)	3.84 (.17)
Perceived Like.	2.78 (.09)**	2.42 (.08)**	2.46 (.09)**	2.73 (.08)**
Influence of Others	1.48 (.03)	1.52 (.03)	1.51 (.03)	1.49 (.03)
Avoidance Motiv.	2.63 (.11)	2.71 (.11)	2.62 (.11)	2.72 (.11)

Note: Gen. Self-eff. = Generalized Self-efficacy; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; Perceived Con. = Perceived Control; IOSS = Inclusion of Others in Self; Perceived Like. = Perceived Likeability of self; Avoidance Motiv. = Avoidance Motivation; Estimated marginal means are presented above, ** indicates difference on adaptive functioning measure is significant at the $p < .01$ level; * difference is significant at the $p < .05$ level.

alienation, F (1, 107) = 3.26, p = .07, for competence and relatedness events.

Univariate tests revealed a significant difference on psychological mindedness-interest and psychological mindedness-willingness but in the opposite direction of our predictions. Participants reported greater threats to psychological mindedness-interest, F (1, 107) = 7.71, p < .01, partial η2 =.07, and psychological mindedness-willingness, F (1, 107) = 4.26, p < .05, partial η2 =.04, in relatedness events compared to competence events.

We anticipated that empathy, loneliness, inclusion of others in self, perceived likeability, influence of others, and avoidance motivation would be more threatened by negative relatedness events than negative competence events. Univariate tests revealed that there was no difference on threats to empathy, F (1, 107) = 2.11, p = .16, for relatedness and competence events, that loneliness was worse in relatedness compared to competence events, F (1, 107) = 11.62, p < .001, partial η2 =.10 (see Table 1), there was no difference on inclusion of others in self in relatedness events compared to competence events, F (1, 107) = .28, p = .60, and participants perceived themselves as less likeable after relatedness compared to competence events, F (1, 107) = 16.43, p < .001, partial η2 =.13 (see Table 1). There was no difference on being influenced by others, F (1, 107) = .94, p = .34, or avoidance motivation for relatedness and competence events, F (1, 107) = 1.46, p = .23. These findings indicate that where there is an effect of foregrounded need on adaptive functioning measures; it is more typical for relatedness events to be associated with higher levels of threat than competence events.

Main Effects of Role (Actor/Target) on Adaptive Functioning Measures

We followed up the multivariate main-effect of role by examining univariate tests. See Table 1 for estimated marginal means associated with the tests of significance reported below. We anticipated that self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, and perceived likeability would be more threatened in actor events than target events.

Univariate tests revealed higher levels of threats to self-efficacy in actor compared to target events, F (1, 107) = 11.06, $p < .01$, partial $\eta 2$ =.09, higher levels of threats to self-alienation in actor compared to target events, F (1, 107) = 9.43, $p < .01$, partial $\eta 2$ =.08, higher levels of threats to psychological mindedness-interest in actor compared to target events, F (1, 107) = 21.76, $p < .01$, partial $\eta 2$ =.17, higher levels of threats to perceived likeability in actor compared to target events, F (1, 107) = 28.21, $p < .01$, partial $\eta 2$ =.21, no difference on threats to goal re-engagement in actor and target events, F (1, 107) = .12, p = .73, and no difference on threats to psychological mindedness-willingness in actor or target events, F (1, 107) = 1.04, p =.31 (see Table 1).

We anticipated higher levels of threats to perceived control, empathy, loneliness, influence of others, and avoidance motivation in target compared to actor events. Univariate tests revealed that there was no difference on threats to perceived control in target and actor events, F (1, 107) = 2.47, p = .12, that threats to empathy were stronger in target than in actor events, F (1, 107) = 9.10, $p < .01$, partial $\eta 2$ = .08, there was no difference in loneliness in target and actor events, F (1, 107) = .47, p = .50, no difference on influence from others in target and actor events, F (1, 107) = 2.54, p = .11, and no difference on avoidance motivation in target and actor events F (1, 107) = 1.26, p

= .27. Taken together, these findings indicate that where there is an effect of role on adaptive functioning measures, it is more typical for actor events to be associated with higher levels of threat than target events.

Interactions of Foregrounded Psychological Needs and Role on Threats to Adaptive Functioning

We expected that recalling an actor/competence event would be associated with higher levels of threats to self-efficacy than target/competence, actor/relatedness, or target/relatedness. We expected that target/relatedness events would be associated with the highest levels of loneliness compared to the other three types of events.

Univariate tests revealed that there was no role by foregrounded psychological need interaction for threats to self-efficacy F (1, 107) = 2.50, p = .12, or loneliness F (1, 107) = 1.54, p = .22. Univariate tests revealed a significant role by foregrounded psychological need interaction on perceived control, F (1, 107) = 11.91, p < .01, partial $\eta 2$ = .10. Pairwise comparisons showed that perceived control was more threatened by actor/competence events (*EMM* = 2.78) than actor/relatedness events (*EMM* = 2.54, p < .01) and perceived control was more threatened in target/relatedness events (EMM = 2.80) than actor/relatedness events (*EMM* = 2.54, p < .01). People's sense of having control over events in the competence domain is more threatened when one is the actor than the target. This pattern reverses in the relatedness domain where sense of control is more threatened when one is the target compared to when one is the actor.

Main Effects of Well-being and Emotional Stability on the Relations Between Threatening Events and Measures of Adaptive Functioning

We expected that individuals high in well-being and emotional stability would report diminished threats to adaptive functioning for all four events. We ran a general linear model with role (actor/target) and foregrounded psychological need (competence/relatedness) as within-subjects independent variables and participants' scores on the same 12 adaptive functioning measures above were included as repeated measures dependent variables. We also included measures of psychological well-being and emotional stability (neuroticism from the Big 5 personality inventory) as continuous independent variables.

Analyses revealed main effects of psychological well-being, F (12, 94) = 8.28, p < .001, partial η^2 = .51, and emotional stability, F (12, 94) = 2.32, p = .01, partial η2 = .23 on levels of threat. There were no longer significant main effects of role, F (12, 94) = 1.28, p > .05, or foregrounded psychological need, F (12, 94) = 1.03, p > .05, on levels of threat. There was no longer a significant role by foregrounded psychological need interaction, F (12, 94) = .83, p > .05. The interactions of well-being by role F (12, 94) = 1.53, p > .05, and well-being by foregrounded need F (12, 94) = .93, p > .05, were not significant nor were the interactions of emotional stability by role, F (12, 94) = .99, p > .05, or emotional stability by foregrounded need, F (12, 94) = 1.42, p > .05. The three-way interactions (well-being by role by foregrounded need and emotional stability by role by foregrounded need) were also not significant, F (12, 94) = 1.12, p > .05, F (12, 94) = .95, p > .05, respectively. However, univariate analyses revealed a significant psychological well-being by role interaction on threats to self efficacy, F (1, 105) = 4.48,

$p < .05$, partial $\eta^2 = .04$. We first followed this finding up with correlational analyses. The relationship between psychological well-being and threats to self-efficacy was stronger in target ($r = -.60$, $p < .01$) than actor events ($r = -.49$, $p < .01$).

Univariate analyses also revealed a significant psychological well-being by foregrounded need interaction on inclusion of others in self, F (1, 105) = 4.54, $p < .05$, partial $\eta 2 = .04$. Correlational analyses showed that the relationship between psychological well-being and threats to inclusion of others in self was stronger in relatedness events ($r = -.16$, $p = .07$) than competence events ($r = -.06$, $p = .51$), though neither of these findings were statistically significant so we do not mention them further. Finally, univariate tests revealed a significant emotional stability by foregrounded psychological need interaction on psychological mindedness-willingness, F (1, 105) = 4.53, $p < .05$, partial $\eta^2 = .04$. The relationship between emotional stability and threats to psychological mindedness-willingness was stronger in relatedness events ($r = -.35$, $p < .01$) than in competence events ($r = -.18$, $p < .05$). These findings suggest that individual differences in well-being and emotional stability may lead people to feel different degrees of threat from different types of negative events. Notably, in terms of average levels of threat, well-being and emotional stability were negatively associated with magnitudes of threat regardless of event type.

Consistent with the effect sizes reported from the GLM, those relationships were stronger for well-being than for emotional stability. In sum, these results suggest that after adjusting for person characteristics (individual differences in well-being and emotional stability), event characteristics (role and the foregrounded psychological need) are largely not associated with specific types of adaptive functioning threats.

Next we expanded on the correlations reported above. Relying only on correlations is limited because they cannot tell us whether event-based variability in types of threats differ for those who scored high on well-being and emotional stability compared to those who score low on well-being and emotional stability.

Exploratory Analyses: Further Examination of The Relationships Between Individual Differences and Threat Types

We calculated median splits for well-being and emotional stability to categorize participants as high and low scorers on those measures. We computed each person's average score for each adaptive functioning threat (e.g., mean self-alienation level) across event types (actor/competence, target/competence, actor/relatedness, and target/relatedness, see Table 2). We also computed variability for each participant for each adaptive functioning measure (e.g., variance self-alienation) across event types. We did this so that we could assess the extent to which standings on individual differences predicted consistency vs. variability in particular forms of adaptive functioning threats.

We tested whether participants who scored high vs. low on well-being and high vs. low on emotional stability differed in variability for each adaptive functioning threat (e.g., variance self-alienation) across event types. We ran a general linear model with variability on the adaptive functioning measures as dependent variables and dichotomized well-being and emotional stability as between subject's independent variables.

Multivariate tests revealed that there were no significant main effects of well-being, F (11, 111) = 1.05, p = .41, or emotional stability, F (11, 111) = 1.08, p = .39, and no well-being by emotional stability interactions, F (11, 111) = 1.09, p = .37, on

Table 2. Average Levels of Threat Across Events and Their Correlations With Well-being and Emotional Stability Study 1.

Dependent Measures	Avg. Score (*SD*)	Well-being	Emo. Stability	Avg. Var. (*SD*)
Gen. Self-eff.	2.68 (.94)	-.58**	-.29**	.48 (.61)
Goal Re-engage.	2.45 (.92)	-.60**	-.22*	.53 (.68)
Self-alienation	1.67 (.67)	-.48**	-.22*	.39 (.60)
Psych. Minded Int.	2.96 (.82)	-.13	-.10	1.51 (1.28)
Psych. Minded Will.	2.50 (.97)	-.39**	-.29**	.71 (.77)
Perceived Con.	2.71 (.80)	-.60**	-.24**	.34 (.41)
Empathy	2.85 (.94)	-.39**	-.25**	.67 (.82)
Loneliness	1.81 (.85)	-.52**	-.20*	.47 (.78)
IOSS	3.81 (1.72)	-.12	.02	2.50 (2.73)
Perceived Like.	2.58 (.78)	-.53**	-.26**	.52 (.56)
Influence of Others	2.35 (.80)	-.28**	-.26**	.49 (.66)
Avoidance Motiv.	2.69 (1.05)	-.18*	-.32**	.67 (.87)

Note: Gen. Self-eff. = Generalized Self-efficacy; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; Perceived Con. = Perceived Control; IOSS = Inclusion of Others in Self; Perceived Like. = Perceived Likeability of self; Avoidance Motiv. = Avoidance Motivation; Estimated marginal means are presented above; Emo. Stability = Emotional Stability; Avg. Var. = Average Variability; * $p < .05$; ^ $p < .06$, ** $p < .01$

variability scores. Tests of between-subject's effects revealed that participants who scored high on well-being had higher variability in self-efficacy threat levels across events (*EMM* = .57) compared to those who scored low on well-being (*EMM* = .33), F (1, 121) = 4.07, $p < .05$, partial $\eta^2 = .03$. Between-subject's effects also revealed a significant well-being by emotional stability interaction on variability in self-alienation threat levels across events, F (1, 121) = 4.01, $p < .05$, partial $\eta^2 = .03$. Pairwise comparisons indicated that individuals low in well-being and low on emotional stability had greater variability in self-alienation threat levels reported across events (*EMM* = .50) than those high in well-being and low on emotional stability (*EMM* = .18, p = .03).

Our exploratory analyses suggest that individual differences in well-being and emotional stability, and combinations of individual differences may be linked to people perceiving different patterns of adaptive functioning threats across events. We note that well-being and emotional stability were highly correlated in the current study, $r = .57$, $p < .01$. Yet not everyone who scores high on well-being scores high on emotional stability, and different combinations of those individual differences appear to matter for the degree to which people vary on self-alienation across events.

Discussion

As a first step toward moving away from a one-size-fits-all approach to events and meaning-making, we elicited memories of four negative events that differed on the role (actor/target) people played in the event and the psychological need the events foregrounded (competence/relatedness). We tested the implications of those different event characteristics (actor/competence, target/competence, actor/relatedness,

target/relatedness) on a battery of adaptive functioning measures and the extent to which person characteristics mattered for relationships between event characteristics and threat levels.

In terms of event characteristics, we found that the actor and relatedness events were associated with a wider range of adaptive functioning threats and stronger levels of threats than target and competence events. However, relationships between types of events and types of threats were no longer significant when accounting for person characteristics (well-being and emotional stability). These findings are discussed below.

Event Characteristics – Foregrounded Psychological Needs

Relatedness events were associated with a broader range of threats to adaptive functioning than competence events. Compared to competence events, relatedness events were associated with greater feelings of loneliness, diminished perceived self-likeability, diminished interest in understanding the meaning and motivation behind one's actions (interest in psychological mindedness), as well as with diminished willingness to delve into the feelings and psychological characteristics that the negative event generated (willingness to engage in psychological mindedness).

Unexpectedly, there was no difference for feeling efficacious after participants recalled competence events compared to when they recalled negative relatedness events. One reason for this null finding may be that the college-aged participants comprising the Study 1 sample may be at a time in their lives that equally prioritizes vocational identity considerations and intimacy concerns (Arnett, 2000). Consequently, feelings of efficacy (and inefficacy) may arise equally in those domains when things go wrong. It may also be

the case that we did not include measures that adequately distinguished adaptive functioning in the competence domain from the relatedness domain. We address this limitation in Study 2 by adding three adaptive functioning items that assess competence in the vocational domain (e.g., perceived intelligence).

Event Characteristics – Role

The overall pattern of results indicated that when there was an effect of role on adaptive functioning measures, it was more typical for actor events to be associated with higher levels of threats than target events. Actor events were associated with higher levels of threats to self-efficacy, self-alienation, psychological mindedness-interest, and perceived likeability than target events. Target events were only associated with higher levels of threat than actor events for one of our adaptive functioning measures, empathy for others. This finding is in line with past research, which finds that victims of harm tend to focus on their own subjective experiences as opposed to the intentions, motivations, or emotions of the perpetrator (Wainryb et al., 2005). In sum, these findings hold that the negative events in which we see ourselves as the "actor" may be associated with higher levels of threats for more forms of adaptive functioning than target events.

Role by Foregrounded Need Interactions

Target/relatedness events were associated with higher levels of threat to perceived control than actor/relatedness events were. However, actor/competence events were associated with greater threats to perceived control than actor/relatedness events. Recall that the perceived control measure is meant to assess the extent to which people feel that

their own characteristics, actions, and choices contribute to their being able to reach desired outcomes.

The first part of this interaction (target/relatedness > actor/relatedness) fits conceptually with the difference between losing control through being targeted vs. exercising control through action. The second part of the interaction (actor/competence > actor/relatedness) may be linked to negative actor/competence events having more intrapersonal characteristics and actor/relatedness events having more interpersonal characteristics. That is, although people exert control and make choices in the relational domain, when doing so, we may maintain some sense that other people's goals in the relational domain may not align with our own. The complex mix of one's own and other peoples' goals may lead one to feel that actor/relatedness events are less "controllable" in general. In contrast, actor/competence events may be largely about achievement and may center around activities of vocational and academic strivings in which success or failure may be perceived as more a function of one's own individual, intrapersonal characteristics (like knowledge and skill). The young adults in our sample may perceive being able to exert more control over actor/competence events than control over relational-oriented (actor/relatedness) events.

Individual Differences

Perhaps the most important finding in Study 1 was that when we accounted for individual differences in well-being and emotional stability, the relationships between types of events and types of threats were no longer statistically significant. Indeed, we found strong main effects of well-being and emotional stability on types of threats. This

finding supports the idea that the degree of threat to adaptive functioning that people experience is more tied to characteristics of individuals than to characteristics of events. In particular, and consistent with past findings suggesting that psychological well-being and emotional stability may linked to other beneficial characteristics (e.g., Lilgendahl et al., 2013; Mansfield et al., 2015; Ryff, Keyes, & Hughes, 2003), Study 1 results indicated that higher well-being and emotional stability was associated with lower average levels of threat to adaptive functioning regardless of event type (see Table 2).

Participants who scored high on well-being reported greater variability in the degree of threat they perceived to self-efficacy across events compared to participants who scored low on well-being (see Table 3). High variability could indicate a compartmentalization of threat level such that one event type is more linked to threats to self-efficacy (high threat to self-efficacy scores) than other events (low threat to self-efficacy scores). If this is true, people who score high on well-being appear to exhibit greater "compartmentalization of threats to self-efficacy" whereas those who score low on well-being exhibit greater diffusion of threats to self-efficacy across events. However, we also showed that people who scored high on well-being and low on emotional stability reported greater variability in threats to self-alienation across events compared to those who scored low on well-being and low on emotional stability. Thus, to the extent that the compartmentalization and diffusion of threats by events is accurate, compartmentalization and diffusion may depend on specific combinations of individual differences and not just levels on a single individual difference.

Perhaps the most straightforward implication of the finding that variability in levels of some forms of threats (self-efficacy and self-alienation) is tied to individual

Table 3. Average Variability in Levels of Threat Study 1 and Study 2.

	Study 1	Study 2
	Avg. Variability (*SD*)	Avg. Variability (*SD*)
Gen. Self-eff.	.48 (.61)	.71 (.79)
Goal Re-engage.	.53 (.68)	.65 (.83)
Self-alienation	.39 (.60)	.52 (.88)
Psych. Minded. Int.	1.51 (1.28)	1.51 (1.29)
Psych. Minded. Will.	.71 (.77)	.77 (.91)
Self-Worth	Not Collected	.07 (.08)
Perceived Con.	.34 (.41)	.67 (.81)
Empathy	.67 (.82)	.67 (.81)
Loneliness	.47 (.78)	.38 (.65)
IOSS	2.50 (2.73)	5.04 (3.17)
Perceived Like.	.52 (.56)	.63 (.74)
Influence of Others	.49 (.66)	.38 (.54)
Avoidance Motiv.	.67 (.87)	1.06 (1.24)

Note: Note: Gen. Self-eff. = Generalized Self-efficacy; Goal Re-engage. = Goal Re-engagement; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; Perceived Con. = Perceived Control; IOSS = Inclusion of Others in Self; Perceived Like. = Perceived Likeability of self; Avoidance Motiv. = Avoidance Motivation

differences, is that person features, not just event features, matter for perception of threats. In sum, although types of events may be linked to types of threats, individual differences in well-being and emotional stability had stronger relationships with level of threat. An important limitation of Study 1 is that we can only generalize our findings to other young adult college students. Thus, we sought a more generalizable community sample for Study 2 comprised of people across the adult age range.

Past research on challenging events indicate that older adults are less likely than younger adults to view negative, self-discrepant experiences as a challenge to self (Rice & Pasupathi, 2010). Work on emotion and aging indicates that as people age through adulthood, negative emotional experiences become less enduring whereas positive emotional experiences endure longer (Carstensen, Pasupathi, Mayr, & Nesselroade, 2000). Other work finds small but significant increases in some aspects of well-being with age (autonomy, self-acceptance, positive relations with others, environmental mastery), and small but significant decreases in other aspects of well-being with age (purpose in life, personal growth; Ryff et al., 2003). Furthermore, people seem to change expectations for the self such that actual and ideal selves are more aligned across adulthood (Ryff, 1991), which may help "smooth out" the shocks of negative self-relevant events.

In addition, increasing experience in dealing with life stressors may promote overall competence and resolve as we age. From the framework of the Competence-environmental Press Model (Lawton & Nahemow, 1973), increased experience with stressors may limit the degree to which older adults perceive new negative events as threatening. Similarly, Socioemotional Selectivity theory (Carstensen, Isaacowitz, &

Charles, 1999) argues that changes in our social-emotional priorities as we age may help older adults become resilient in the face of stress.

Socioemotional selectivity theory argues that as we near the end of our lives, we come to the realization that we have less time in front of us than we had when we were younger. As the "time horizons" shorten, they usher in a change in our social motives. Instead of prioritizing acquisition of new knowledge and new skills, as young adults with long time horizons do, older adults begin to prioritize emotion-regulation and better functioning relationships with important social partners. As a consequence, older adults may become better at disregarding events that are not central to their most important social relationships. These works suggest that changes associated with aging may be especially relevant for how people process threats from different types of negative events. In Study 2, we collected data from people ranging in age from 20 to 69. Sixty-nine was our cutoff because we wanted to limit issues of individual differences in cognitive decline that are more likely to be associated with aging in the 70s and beyond.

We also added three single-item self-perception dependent measures (perceptions of intelligence, self-worth, and effectiveness at work) that we anticipated might better distinguish negative competence and relatedness events. We also adjusted the prompt for target competence events in Study 2. The Study 1 target competence prompt inadvertently confounded competence with relatedness needs ("Now I want you to think of a time when someone close to you did or said something that negatively affected your sense of competence."). In Study 2, we adjusted that prompt to say: "Now I want you to think of a time when someone else did or said something that negatively affected your sense of competence."

CHAPTER 3

STUDY 2

Hypotheses

We had the following goals for Study 2. First, we wanted to test age differences on perceived threats in our four different types of negative events. Second, we wanted to determine whether main effects of foregrounded psychological need would remain primarily attributable to relatedness being foregrounded as opposed to competence. Third, we wanted to determine whether main effects of role on threats would remain primarily attributable to being the actor as opposed to target. Fourth, we wanted to determine whether main effects and interaction effects of foregrounded need and role disappeared when we included individual differences in well-being and emotional stability using a more generalizable sample of community participants.

Study 2 used a more representative sample of adults as opposed to college students. College students may be a specialized population for whom the association between degree of threat and type of event may differ compared to older adult community participants. Thus, we went back to our initial reasoning that negative events that foreground competence and relatedness events and those in which one is the actor vs. target may create particular kinds of adaptive functioning threats. We again tested our

original hypotheses from Study 1 with small changes as described below.

Main Effects of Age

We anticipated that age would be broadly associated with decreased levels of threat across the different event types.

Main Effects of Foregrounded Psychological Needs (Competence/Relatedness) on Threats to Adaptive Functioning

Drawing on the agency-oriented dependent measures, we anticipated that there would be more challenges to self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, having an internal locus of control, and perceived choice in negative competence events than negative relatedness events. New to Study 2, we also anticipated that perceptions of intelligence, being effective at work, and having high self-worth would be more threatened in competence than relatedness events because those aspects of self-evaluation may be strongly linked to achieving in the vocational domain.

We anticipated that there would be greater threats to empathy for others, greater sense of loneliness, greater threats to inclusion of others in self, perceived self-likeability, influence of others on self, and avoidance motivation in negative relatedness events than in negative competence events.

Main Effects of Role (Actor/Target) on Threats to Adaptive Functioning

We anticipated that there would be higher levels of threats to self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, perceived likeability, and perceptions of intelligence, effectiveness at work, and having high self-worth in negative actor events than in negative target events.

We anticipated that there would be higher levels of threats to perceived choice, locus of control, empathy for others, greater loneliness, greater influence of others on self, and avoidance motivation in negative target events than in negative actor events.

Interactions of Foregrounded Psychological Need (Competence/Relatedness) and Role (Actor/Target) on Adaptive Functioning

We anticipated that actor/competence events would be associated with higher levels of threats to self-efficacy and to perceptions of intelligence, being effective at work, and having high self-worth than the other three events. Again, we expected this because of the potentially agentic, goal-oriented nature of competence events and the fact that being in the actor role may be associated with people being likely to perceive the self as a "failure." We anticipated that target/relatedness events would be associated with higher loneliness than the other events. Based on Study 1 findings, we also anticipated that we would replicate the crossover interaction, such that perceived control was more threatened in actor/competence than target/competence, but perceived control was more threatened in target/ relatedness than actor/relatedness events. Conceptually, this finding makes sense per the Study 1 Discussion.

Main Effects of High Well-being and Emotional Stability on the Relations Between Threatening Events and Measures of Adaptive Functioning

Consistent with Study 1, we expected that being high in well-being and emotional stability would again be associated with lower threats to adaptive functioning after recalling the four negative events.

Method

Participants

Community participants were recruited from Amazon's Mechanical Turk platform (n = 224). Six participants were dropped from the sample for not completing large portions of the data (see Appendix A for full information about sample and data preparation). As in Study 1, we examined the remaining 218 participants' responses to the three memory anchors for each event in order to determine whether each participant nominated an event that matched the prompt. For example, when prompted for actor/competence, we examined the anchor items to assess whether the participant caused the negative event and whether the negative event would have foregrounded the psychological need for competence. Following recommended best practices when collecting data from Mechanical Turk workers (Grysman, in press), we also included in the survey an attention check item in three places that prompted participants as follows: "This is an attention check item. Please click 'Strongly Agree' to demonstrate that you have read this question." Only those participants who nominated events that matched the prompted event and who correctly responded to all three attention check items were included in the final analyses.

Of the 218 participants, 141 met both of the above standards. Loss of participants by age-group went as follows: for the 20-29 year old age group, 14 of 45 participants (31%) were dropped; for the 30-39 year old age group, 12 of 40 (30%) were dropped; for the 40-49 year old age group, 14 of 40 (35%) were dropped; for the 50-59 year old age group, 23 of 57 (40.4%) were dropped; and for the 60-69 year old age group, 20 of 42 (47.6%) were dropped. The 141 participants in the final sample scored significantly higher on trait conscientiousness ($M = 4.07$, $SD = .67$) than those who were dropped from the sample ($M = 3.85$, $SD = .77$), $t(222) = 2.23$, $p = .03$. Kept participants did not differ on neuroticism $t(222) = -.72$, $p = .47$, openness to experience $t(222) = .19$, $p = .85$, extraversion $t(222) = -1.24$, $p = .22$, agreeableness $t(222) = .50$, $p = .62$, trait hostility $t(222) = .09$, $p = .93$, or psychological well-being $t(222) = 1.31$, $p = .19$ from those who were dropped.

The final sample included 31 individuals in the 20-29 year age group, 28 in the 30-39 year age group, 26 in the 40-49 year age group, 34 in the 50-59 year age group, and 22 in the 60-69 year age group. The final sample (female = 75) had an average age of 43.32 ($SD = 13.82$, range 20-69) and 7.1% of those participants reported being African American, 3.5% Asian American, 80.9% European American, 6.4% Latino American, 1.4% reported being Native American, 0.7% chose not to disclose, and 2.1% chose Other as their ethnicity.

Again, we were concerned with what reducing sample size cost us in terms of our power to detect statistically significant effects. We did the same analyses as in Study 1 to determine our achieved power given our reduction in sample size to 141 participants. Post-hoc analyses for repeated measures MANOVA using G*power 3.0 (Erdfelder, Faul,

& Buchner, 1996), given an alpha of .05, and our sample size of 141 (again estimating effects using the *F* test family) indicated that when testing within-subjects effects on our dependent variables, we had power of .99 to detect a Cohen's f^2 effect size of =.02, which is a small effect size according to Cohen (1988). We found that we had substantially more power to detect between-subjects effects in Study 2. Our power to detect the same small effect (Cohen's f^2 = .02) when testing between group factors with 2 levels was reduced to .81.

Procedure

Study 2 used the same procedure as Study 1. The survey was identical other than our changing the target-competence prompt, the addition of self-compassion as an individual difference measure in the initial section of the survey, three single-item dependent measures aimed at disentangling competence and relatedness events (described in Measures), the Personal Attributes Questionnaire (which was completed with other individual differences questionnaires at the beginning of the study), and a Meaning-making questionnaire (which was completed at the very end of the survey after participants had written about their final negative event). Measures added in Study 2 are described in the Measures section.

Participants first read a brief description of the study on MTurk. Participants were notified that they would be paid 3 dollars per hour for 2 hours of anticipated work for a total of 6 dollars. Those interested in participating then clicked a link to the Qualtrics survey. There, participants read the same consent form as used in Study 1. Participants provided consent by clicking "next" as in Study 1. The survey was opened on MTurk to

people in the age categories 20-29, 30-30, 40-49, 50-59, and 60-69.

To ensure that participants were in the correct age group, they were asked to enter their age after completing consent. If their age was not in the specified range for the posted age group (that is, if someone entered '22' in the 30-year-olds' survey), they were directed to an end page and not paid. After the debriefing page at the end of the survey, participants were given a validation code that they emailed back to the researcher. We used this to reimburse participants.

Measures

Below, we list reliability coefficients for all variables but only describe new measures added in Study 2. For Psychological Well-being (Ryff, 1989), subscale reliabilities were as follows: self-acceptance, $\alpha = .92$; personal growth, $\alpha = .88$; purpose in life, $\alpha = .86$; positive relations with others, $\alpha = .88$; autonomy, $\alpha = .85$; environmental mastery, $\alpha = .88$; and at the overall level, $\alpha = .96$. For the Big Five Inventory (John & Srivastava, 1999), subscale reliabilities were as follows: extraversion, $\alpha = .90$; agreeableness, $\alpha = .83$; conscientiousness, $\alpha = .86$; neuroticism, $\alpha = .89$, openness to experience $\alpha = .87$.

Participants again completed Likert-type self-report questionnaire ratings assessing a variety of distinct forms of adaptive functioning. Each scale listed was again limited to the same three items used in Study 1. Once more, higher scores represented higher magnitude of threat to adaptive functioning. Alpha values presented below are for participants' responses to each scale after thinking about the actor/competence; target/competence; actor/relatedness; and target/relatedness events, respectively.

Reliabilities are not computed for single-item measures.

The Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) items displayed good reliability (α = .84, .93, .92, .93). The Goal Re-engagement Scale (Wrosch et al., 2003) items displayed excellent reliability (α = .94, .95, .95, .93). The Self Alienation-Authenticity Scale (Wood et al., 2008) items displayed good reliability (α = .89, .89, .92, .90). We used the same single-item measures of Psychological Mindedness-Interest and Willingness (Conte et al., 1996). The Perceived Choice (Sheldon & Deci, 1996) items displayed good reliability (α = .83, .88, .84, .88). The Multidimensional Locus of Control – Internal subscale (Levenson, 1981) items displayed good reliability (α = .87, .91, .85, .86).

In Study 2, we added items from the Self-perception Profile for Adults (Messer & Harter, 2012) scale. The three items we added were from independent subscales of the self-perception profile for adults. Participants responded on a scale of 1 (not at all true) to 5 (completely true).

One item was adapted from the perceptions of intelligence scale:

1. After thinking about this event, I question my intelligence.

One item was adapted from the job competence scale:

2. After thinking about this event, I worry whether I can do my work effectively or not.

One item was adapted from the perceptions of global self-worth scale:

3. After thinking about this event, I question whether I am a worthwhile person or not.

The three items from the Perspective Taking subscale of the Interpersonal Reactivity Index (Davis, 1980) displayed excellent reliability (α = .89, .93, 91, .92). The three items from the UCLA Loneliness Scale (Russell et al., 1978) displayed excellent reliability (α = .93, .93, 92, .93). We once again used the single item from Study 1 to assess Inclusion of Others in Self Scale (Aron et al., 1992). We used our single-item measure of Perceived Likeability (adapted from Snyder & Swann, 1978) to have participants rate how likeable he or she perceived the self to be after thinking of each negative event. The three items from the Influence from Others scale (Wood et al., 2008) once again displayed good reliability (α = .88, .90, .87, .88). Finally, the three items from the Avoidance Motivation subscale of the Transgression Related Interpersonal Motivation Scale (see McCullough, et al., 1998; McCullough et al., 2006) displayed excellent reliability (α = .93, .93, .94, .92).

We used the same two items, adapted from the Basic Needs General questionnaire (see Deci et al., 2001) as a manipulation check to test the extent to which recalling a competence event was associated with challenges to competence and recalling a relatedness event was associated with challenges to relatedness. Participants responded on a 1 (not at all true) to 5 (completely true) Likert-type scale.

For each negative event imagined, participants also responded to an item assessing the extent to which it was difficult for him or her to vividly imagine the event and an item assessing how much effort he or she put forth imagining the event using a 1 (not at all) to 5 (extremely) Likert-type scale. As in Study 1, we again used Trait Hostility (Buss & Perry, 1992) to compare included and excluded participants, α = .87.
Again, the Subjective Vitality scale (Ryan & Frederick, 1997) failed to demonstrate

desirable internal consistency across the four events (actor/competence, target/competence; actor/relatedness; target/relatedness, respectively, α = .62, α =.58, α =.55, α =.61). As a consequence, subjective vitality was not included as a dependent variable. Participants also rated the extent to which he or she felt angry, guilty, ashamed, sad, afraid, and anxious using a 1 (not at all) to 5 (extremely) Likert-type scale after imagining each negative event. These measures were not used in the current study.

In Study 2, we added the Self-Compassion Scale (Neff, 2003). The self-compassion scale is made up of three subscales: self-kindness, mindfulness, and common-humanity (see also Raes et al., 2011). Past work has demonstrated that each subscale has good internal consistency (α's ranging from .77 to .81) and reliability for all 26 items is also high at .92. The scale demonstrates good test-retest validity with subscale scores correlated in the .80 to .93 range over a 3-week period. We used a 12-item "short" version of the scale for the current study. Self-kindness was assessed with four items (e.g., I try to be understanding and patient towards those aspects of my personality I don't like), α = .77, mindfulness was assessed with four items (e.g., When something upsets me I try to keep my emotions in balance.), α = .77. Common-humanity was assessed with four items (e.g., I try to see my failings as part of the human condition.), α = .67. We summed the items in the current study and overall (as used in the current study), the scale showed good reliability, α =.89.

We also added the Personal Attributes Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1975) to Study 2. The full 24-item PAQ assesses characteristics commonly associated with masculinity (8 items), femininity (8 items), and androgyny (8 items). We collected data on the 16 masculine and feminine items. Participants saw the following

instructions:

> *"The next 16 items inquire about what kind of person you think you are. For each attribute on the left, please choose the response (click the radio bubble) that best describes HOW CHARACTERISTIC OF YOU the attribute is. For example, if you think that you are not at all artistic you would choose, 'Not at all like me'. If you think that you are pretty artistic, you might choose, 'Like me' (the 4th option), and so forth."*

Participants responded on a 1 (not at all like me) to 5 (just like me) scale to each item.

Finally, after participants wrote narratives of their four negative events, they were prompted to again recall the "last" event he or she had written about. With that event in mind, participants responded on a 1 (strongly disagree) to 7 (strongly agree) scale to 15 items that measured meaning-making about that event. The items assess 4 categories of meaning-making: meaning-made (e.g., "This event is personally meaningful to me"), difficulty with the event ("When I think about why this event happened I am confused"), consistency with self ("This event is a good reflection of who I am now"), and lessons and insight from the event ("I have learned lessons from this event"). See Appendix F for a list of measures and the overall number of measures included in Study 2.

Results

Miscellaneous Analyses: Manipulation Check and Degree of Effort and Difficulty Required

All general linear model analyses reported in the Results section use Pillai's trace unless otherwise stated. We ran a repeated measures general linear model as a

manipulation check with item type (competence item vs. relatedness item), role (actor / target), and foregrounded psychological need (competence event vs. relatedness event) as within-subject's variables and scores on the two items from the Basic Needs General Questionnaire as dependent variables. Thus, we again tested whether competence and relatedness foregrounding events were associated with different patterns of means on our competence and relatedness items from the Basic Needs General questionnaire (Deci et al., 2001). We found the expected significant crossover interaction, F (1,138) = 18.12, p < .01, such that when individuals imagined a competence event, their scores were higher on the competence item (*EMM* = 2.99) than the relatedness item (*EMM* = 2.73) and when individuals imagined a relatedness event, scores were higher on the relatedness item (*EMM* = 2.81) than the competence item (*EMM* = 2.31). After recalling competence events, participants were more likely to report challenges to competence and after recalling relatedness events participants were more likely to report challenges to relatedness.

We then conducted a general linear model to test whether there were differences among the four events in how much effort participants reported the events required to vividly imagine and how difficult participants reported the events were to vividly imagine. Role (actor/target) and foregrounded psychological need (competence/relatedness) were within-subject's independent variables. Degree of difficulty in vividly imagining and degree of effort required were dependent measures. There were no main effects of role, F (1,136) = 1.36, p = .25, or foregrounded psychological need F (1,136) = .84, p = .25, but there was an interaction of role by need on degree of difficulty in vividly imagining the event F (1,136) =9.24, p < .01. Pairwise

comparisons revealed that target/competence events were more difficult to vividly imagine (*EMM* = 1.66) than target/relatedness events (*EMM* = 1.51, $p < .05$). These results did not differ by age group, F (4,132) = .91, $p = .46$.

Also, unlike Study 1, we found a main effect of role on effort put forth imagining the experience F (1,135) = 61.41, $p < .01$, and a main effect of foregrounded need F (1,135) = 72.89, $p < .01$, and those main effects were qualified by a significant role by foregrounded need interaction, F (1,135) = 42.46, $p < .01$. Pairwise comparisons showed that participants put forth more effort to imagine actor/competence events (*EMM* = 3.20) than actor/relatedness events (*EMM* = 1.96, $p < .01$) and marginally more effort to imagine target/competence events (*EMM* = 3.30) than target/relatedness events (*EMM* = 3.18, $p = .07$). These results did not differ by age group, F (4,131) = 1.647, $p = .17$. These two sets of findings suggest that competence events may require more effort for adult participants from 20-69 to imagine than relatedness events and they may be more difficult to vividly imagine. These findings may also be specific to using a noncollegiate sample.

To determine the appropriateness of combining some of the threat type scales to reduce the number of tests of significance, we ran a principal components factor analysis including all of the adaptive functioning measures with varimax rotation and component extraction for eigen values greater than 1. Similar to Study 1, there were 13 components extracted with eigen values greater than one. Recall that in Study 2, I began with 16 different adaptive functioning dependent measures (disregarding subjective vitality). Thus, principle components analyses again did not support combining scales. Consistent with Study 1, scores on the perceived choice and locus of control – internal scales were

again highly correlated for each event recalled (r's > .60, p's < .001). Again, we combined those scales into a single scale called perceived control. Likewise, scores on perceived self-worth, perceived intelligence, and perceived effectiveness at work were highly correlated (r's > .48, p's < .001), so we combined those scores into a single scale called perceived self-worth. No other scales were combined.

Primary Analyses Study 2

Recall that higher scores on the dependent measures represent greater levels of threat. We again computed correlations among the dependent variables by event type. In general, the dependent variables were weakly to moderately related, again suggesting the appropriateness of using a single GLM.

To test whether the pattern of findings from Study 1 was similar in a more representative community sample of adults, we ran a single general linear model in which role (actor/target) and foregrounded psychological need (competence/relatedness) were again within-subjects independent variables and scores on the adaptive functioning measures, Self-alienation, Accepting the Influence of Others, Generalized Self-efficacy, Perceived Control, Loneliness, Empathy, Avoidance Motivation, Perceived Likeability, Inclusion of Others in Self, Interest in Psychological Mindedness, Willingness to Engage in Psychological Mindedness, Goal Re-engagement, and Perceived Self-worth were repeated measures dependent variables, and age was entered as a continuous independent variable.

Multivariate tests of within-subjects effects revealed a main effect of age F (13,110) = 2.04, p < .01, partial η^2 =. 20, no main effects of role, F (13, 110) = 1.30, p =

.23, a main effect of foregrounded psychological need, F (13,110) = 2.22, p = .01, partial η^2 = .21, and a significant role by need interaction, F (13,110) = 1.81, p = .05, partial η^2 =.18 on threats to adaptive functioning. Role by age, F (13, 110) = .50, p = .92, foregrounded need by age, F (13, 110) = .65, p = .80, and role by foregrounded need by age, F (13, 110) = .62, p = .83 interactions were not significant. In subsequent analyses we included gender and order as between-subjects factors and found no gender differences, F (13, 107) = .73, p = .73, or order effects F (13, 107) = .72, p = .74 on levels of threat to adaptive functioning. Results presented below were from analyses that did not include gender or order.

Main Effect of Age on Threats to Adaptive Functioning

We followed up the main effect of age on adaptive functioning measures by computing correlations between age and levels of threat averaged across event types (e.g., a correlation between age and the average level of threats to self-alienation in actor/competence, target/competence, actor/relatedness, and target/relatedness events). Table 4 shows that age was broadly negatively associated with average levels of threat perceived across events. Age was most strongly negatively associated with threats to self-efficacy, goal re-engagement after failures, and with the composite measure of threats to self-worth (that includes threats to perceived intelligence, perceived self-worth, and perceived effectiveness at work). There was only one case in which age was positively associated with threats (motivation to avoid those who have hurt one in the past) and that relationship was not statistically significant. As predicted, these results suggest that aging is associated with diminished perceptions of threats from negative life events.

Table 4. Correlations Between Average Levels of Threat Across Event Types and Age Study 2.

Average Level of Threats Across Event Types	Age
Gen. Self-efficacy	-.33**
Goal Re-engagement	-.30**
Self-alienation	-.12
Psych. Minded Interest	-.01
Psych. Minded Willingness	-.08
Perceived Self-worth	-.22**
Perceived Control	-.21**
Empathy	-.12
Loneliness	-.02
Incl. of Others in Self	-.10
Perceived Self-Likeability	-.22**
Influence of Others	-.04
Avoidance Motivation	.13

Note: ** $p < .01$

Main Effects of Foregrounded Psychological Needs on Threats to Adaptive Functioning

We followed up the multivariate main effect of foregrounded psychological need on threats to adaptive functioning measures with univariate tests. See Table 5 for estimated marginal means associated with the significance tests reported below. We anticipated that self-efficacy, goal re-engagement, self-alienation, psychological mindedness-interest, psychological mindedness-willingness, perceived control, and the composite measure of perceived worth (perceived intelligence, effectiveness, self-worth) would be more challenged by negative competence events than negative relatedness events. There was no difference on threats to self-efficacy, F (1, 122) = 1.02, p = .32, goal re-engagement, F (1, 122) = .56, p = .46, or self-alienation, F (1, 122) = .94, p = .34, psychological mindedness-interest, F (1, 122) = 2.69, p = .10, psychological mindedness – willingness, F (1, 122) = .06, p = .82, or perceived control, F (1, 122) = .01, p = .91 for competence and relatedness events. However, threats to perceived worth were stronger in competence than in relatedness events, F (1, 122) = 10.00, p < .01, partial η^2 = .08 (see Table 5).

We anticipated that empathy, loneliness, inclusion of others in self, perceived likeability, influence of others, and avoidance motivation would be associated with higher levels of threat in negative relatedness events than negative competence events. Univariate tests revealed that there was no difference on level of threat to empathy, F (1, 122) = .58, p = .45, for relatedness and competence events, that loneliness was worse in relatedness compared to competence events, F (1, 122) = 4.94, p < .05, partial η^2 = .04 (see Table 5), there was no difference on inclusion of others in self, F (1, 122) = 2.29, p =

Table 5. Test of Main Effects of Role and Foregrounded Psychological Need on Measures of Adaptive Functioning in Study 2 (Higher Values Represent Greater Threats).

Dependent Measures	Role		Psychological Need	
	Actor	Target	Competence	Relatedness
Gen. Self-eff.	3.05 (.09)**	2.90 (.10)**	3.00 (.10)	2.91 (.09)
Goal Re-engage.	2.99 (.10)**	2.72 (.10)**	2.80 (.10)	2.92 (.10)
Self-alienation	1.30 (.03)**	1.21 (.02)**	1.24 (.03)	1.27 (.03)
Psych. Minded Int.	1.68 (.03)**	1.40 (.03)**	1.51 (.03)	1.58 (.03)
Psych. Minded Will.	1.46 (.03)	1.45 (.03)	1.43 (.03)*	1.48 (.03)*
Perceived Self-worth	1.44 (.03)**	1.32 (.03)**	1.44 (.03)*	1.32 (.03)*
Perceived Con.	2.95 (.08)	2.96 (.09)	3.00 (.09)	2.91 (.08)
Empathy	2.85 (.09)**	3.13 (.10)**	3.10 (.10)**	2.90 (.10)**
Loneliness	1.29 (.03)	1.28 (.03)	1.24 (.03)**	1.33 (.03)**
IOSS	3.13 (.16)**	3.95 (.10)**	3.82 (.08)**	3.26 (.17)**
Perceived Self-Like.	2.96 (.08)**	2.59 (.08)**	2.70 (.08)**	2.85 (.08)**
Influence of Others	1.41 (.03)	1.40 (.03)	1.42 (.03)	1.38 (.03)
Avoidance Motiv.	2.42 (.11)**	3.02 (.11)**	2.61 (.10)**	2.83 (.11)**

Note: Gen. Self-eff. = Generalized Self-efficacy; Goal Re-engage. = Goal Re-engagement; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; Perceived Con. = Perceived Control; IOSS = Inclusion of Others in Self; Perceived Like. = Perceived Likeability of self; Avoidance Motiv. = Avoidance Motivation. Estimated marginal means are presented above. ** indicates difference on adaptive functioning measure is significant at the $p < .01$ level; * difference is significant at the $p < .05$ level.

.13, perceived likeability, F (1, 122) = 2.09, p = .15, being influenced by others, F (1, 122) = .66, p = .42, or avoidance motivation for relatedness and competence events, F (1, 122) = 2.08, p = .15. These findings indicate that negative events which foreground competence needs are more likely to threaten perceptions of the self associated with intelligence, effectiveness, and worth than negative events that foreground relatedness. They also indicate that negative events that foreground relatedness are more likely to be associated with feeling lonely than negative events that foreground competence (replicating a finding from Study 1).

Main Effects of Role (Actor/Target) on Threats to Adaptive Functioning

Although multivariate tests did not reveal a significant main effect of role, univariate tests showed that motivation to avoid those who caused one harm in the past was stronger in target than in actor events, F (1, 122) = 4.53, $p < .05$, partial η^2 = .04.

Interactions of Role and Foregrounded Psychological Need on Threats to Adaptive Functioning

We expected that actor/competence events would be associated with higher levels of threat to self-efficacy than target/competence, actor/relatedness, or target/relatedness. We expected that recalling a target/relatedness events would be associated with the highest levels of loneliness compared to the other three events.

Univariate tests revealed that there was no role by foregrounded psychological need interaction for threats to self-efficacy, F (1, 122) = 1.55, p = .22, or loneliness F (1, 122) = 1.97, p = .16 (see Table 5).

Univariate tests revealed a significant role by foregrounded psychological need interaction on perceived likeability, F (1, 122) = 8.31, $p < .01$, partial $\eta^2 = .06$. Pairwise comparisons showed that likeability was more threatened by actor/relatedness events (*EMM* =3.19) than target/relatedness events (*EMM* = 2.51, $p < .01$) and there was not a significant difference in likeability between actor/competence (*EMM* = 2.73) and target/competence (*EMM* = 2.66) events.

There was also a significant role by foregrounded psychological need interaction on level of threat from influence of others, F (1, 122) = 7.12, $p < .01$, partial $\eta^2 = .06$. Pairwise comparisons revealed that people felt more influenced by others in actor/relatedness (*EMM* = 1.42) than target/relatedness (*EMM* = 1.35, $p = .01$) events and there was no difference in feeling influence from others in actor/competence (*EMM* = 1.40) and target/competence (*EMM* = 1.44) events. People's perceptions of likeability were more threatened and people felt more influenced by others in actor/relatedness events compared to target/relatedness events.

Main Effects of Well-being and Emotional Stability on the Relations Between Threatening Events and Measures of Adaptive Functioning

To examine whether or not we could replicate Study 1 findings with well-being and emotional stability, we ran a second general linear model that matched the specifications of the general linear model that included well-being and emotional stability run in Study 1. Thus, this GLM did not include age. Like Study 1, this GLM had role (actor/target) and foregrounded psychological need (competence/relatedness) as within-subjects independent variables and participants' scores on the same 13 adaptive

functioning measures above were included as repeated measures dependent variables and we included continuous measures of psychological well-being and emotional stability (neuroticism from the Big 5 personality inventory) as independent variables (age was not included).

Analyses revealed main effects of psychological well-being, F (13, 109) = 3.92, p < .001, partial η^2 = .32, and emotional stability, F (13, 109) = 2.65, p <.01, partial η^2 =.24. Consistent with Study 1, there was no longer significant main effects of role, F (13, 109) = 1.14, p > .05, or foregrounded psychological need, F (13, 109) = .72, p > .05, on levels of threat to adaptive functioning. There was no longer a significant role by foregrounded psychological need interaction, F (13, 109) = .83, p > .05. The interactions of well-being by role F (13, 109) = 1.31, p > .05, and well-being by foregrounded need, F (13, 109) = .71, p > .05, were not significant nor were the interactions of emotional stability by role, F (13, 109) = 1.24, p > .05, or emotional stability by foregrounded need, F (13, 109) = 1.33, p > .05. The three-way interactions (well-being by role by foregrounded need, and emotional stability by role by foregrounded need) were also not significant, F (13, 109) = .62, p > .05; F (13, 109) = .95, p > .05, respectively.

However, univariate tests revealed a significant emotional stability by role interaction on level of threat to goal re-engagement, F (1, 121) = 4.38, p < .05, partial η^2 =.04, and higher scores on loneliness F (1, 121) = 4.98, p < .05, partial η^2 =.04. Initially, we followed these findings up with correlational analyses and we describe those next. However, as in Study 1, we also computed median splits on well-being, and emotional stability (and age given the main effects of age above), and we describe those findings in exploratory analyses below.

Our first pass with correlations showed that the negative relationship between emotional stability and threats to goal re-engagement was stronger for actor (r = -.47, p < .01) than for target events (r = -.33, p < .01) and that the negative relationship between emotional stability and loneliness was stronger for target (r = -.33, p < .01) than for actor events (r = -.25, p < .01).

In sum, after adjusting for person characteristics (individual differences in well-being and emotional stability), event characteristics (role and the foregrounded psychological need) are largely not associated with specific types of adaptive functioning threats, and individual differences in emotional stability show relationships with the degree to which individuals report threats to goal re-engagement and levels of loneliness when they are the actor vs. target.

Exploratory Analyses: Further Examination of the Relationships Between Individual Differences and Threat Types

As in Study 1, to further explore the main effects of well-being and emotional stability on levels of threat, we computed each person's average score for each adaptive functioning threat (e.g., mean self-alienation level) across event types (actor/competence, target/competence, actor/relatedness, and target/relatedness) and each person's variability for each adaptive functioning threat (e.g., variance self-alienation) across event types.

We calculated median splits for well-being and emotional stability to categorize participants as high and low scorers on those measures. We also calculated a median split for age to dichotomize our sample in to younger and older adults. Median age in the sample was 42 years old. We tested whether participants who scored high vs. low on

well-being, high vs. low on emotional stability, and who were older and younger differed in variability for each adaptive functioning threat (e.g., variance self-alienation) across event types. See Table 3 for a summary of averages and Table 6 for correlations between average threat levels and individual difference measures.

We ran a general linear model with variability on the adaptive functioning measures as dependent variables and dichotomized well-being, emotional stability, and age as between-subject's independent variables. Age and emotional stability were significantly correlated ($r = .16$, $p = .05$), as were emotional stability and well-being ($r = .55$, $p < .01$), but age and well-being were not significantly correlated ($r = .06$, $p > .05$).

Multivariate tests revealed no main effects of well-being, F (12, 122) = 1.00, $p = .50$, emotional stability, F (12, 122) = 1.70, $p = .08$, or age F (13, 109) = .73, $p = .72$, on variability in levels of adaptive functioning threats. Multivariate tests revealed no significant interactions of well-being by emotional stability, F (12, 122) = .61, $p = .83$, well-being by age, F (12, 122) = 1.27, $p = .25$, or emotional stability by age F (12, 122) = .63, $p = .81$, on variability in levels of adaptive functioning threats. There was a significant well-being by emotional stability by age interaction, F (12, 122) = 2.02, $p < .05$.

Tests of between-subjects effects revealed that variability in levels of psychological mindedness-interest threats was larger for people who scored high on well-being (*EMM* = 1.72) than those who scored low on well-being (*EMM* = 1.23), F (1,133) = 4.09, $p < .05$. Variability in levels of threats to feeling empathy for others was larger for people who scored high on emotional stability (*EMM* = .89) compared to those who scored low (*EMM* = .44) on emotional stability F (1,133) = 8.90, $p < .01$. Variability in

Table 6. Average Levels of Threat Across Events and Their Correlations With Well-being and Emotional Stability Study 2.

Dependent Measures	Avg. Score (SD)	Well-Being	Emo. Stability
Gen. Self-eff.	2.96 (.97)	-.44**	-.48**
Goal Re-engage.	2.86 (1.07)	-.46**	-.42**
Self-alienation	1.72 (.76)	-.50**	-.35*
Psych. Minded. Int.	2.58 (.88)	-.19*	-.22**
Psych. Minded Will.	2.27 (.99)	-.37**	-.40**
Perceived Self-worth	1.38 (.27)	-.52**	-.40**
Perceived Con.	2.96 (.87)	-.53**	-.39**
Empathy	3.00 (1.00)	-.27**	-.14
Loneliness	1.78 (.96)	-.52**	-.30*
IOSS	3.56 (1.02)	-.23**	-.21*
Perceived Self-Like.	2.79 (.85)	-.44**	-.30**
Influence of Others	2.09 (.88)	-.30**	-.25**
Avoidance Motiv.	2.66 (1.05)	-.25*	-.12

Note: Gen. Self-eff. = Generalized Self-efficacy; Goal Re-engage. = Goal Re-engagement; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; Perceived Con. = Perceived Control; IOSS = Inclusion of Others in Self; Perceived Self-Like. = Perceived Self-Likeability. Emo. Stability = Emotional Stability;
* $p < .05$; ** $p < .01$

levels of goal re-engagement threats was larger for people who scored high on emotional stability (*EMM* = .84) compared to those who scored low (*EMM* = .52) on emotional stability F (1,133) = 4.18, $p < .05$.

Tests of between-subject's effects showed that the three-way interaction of well-being, emotional stability, and age was significant for variability in levels of self-alienation threats, F (1,133) = 7.03, $p < .01$, variability in levels of influence from others, F (1,133) = 5.44, $p < .05$, and variability in levels of loneliness, F (1,133) = 5.50, $p < .05$. To follow up the three-way interaction, we first split our sample along age. We examined variability in levels of self-alienation threats, variability in levels of influence from others threats, and variability in levels of loneliness as a function of combinations of high and low well-being and high and low emotional stability for the younger adult group and then for the older adult group. Thus, we ran two GLM's (one for young adults and one for older adults) with variability in threats to self-alienation, variability in threats of influence from others, and variability in threats of loneliness as dependent variables, and dichotomized well-being and emotional stability as between-subjects independent variables.

For the younger adults (20 to 41-year-olds), univariate tests of the simple effects of well-being at each level of emotional stability revealed that there were only significant differences for variability in levels of loneliness threats, F (1,65) = 4.43, $p < .05$ (thus we do not discuss variability in threats to self-alienation and influence from others). A significant difference among variability on loneliness threats was found within the low emotional stability group. Young adults who scored low on emotional stability and low on well-being had greater variability in threats to loneliness (*EMM* = .63) than young

adults who scored low on emotional stability but high on well-being (*EMM* = .11).

For older adults (42 to 69-year-olds), univariate tests of the simple effects of well-being at each level of emotional stability revealed significant differences for variability in levels of self-alienation threats, F (1,68) = 7.10, p = .01, and significant differences for variability in levels of influence from others threats F (1,68) = 4.92, $p < .05$ (thus we do not discuss variability in threats to loneliness). For older adults, significant differences were within the high emotional stability group. Older adults who scored high on emotional stability and low on well-being had greater variability in levels of self-alienation threats (*EMM* = .99) than older adults who scored high on emotional stability and high on well-being (*EMM* = .17). Likewise, older adults who scored high on emotional stability and low on well-being had greater variability in levels of influence from others (*EMM* = .67) than older adults who scored high on emotional stability and high on well-being (*EMM* = .22).

These findings suggest that the degree to which people feel threats across events are tied to complex combinations of individual differences like well-being, emotional stability, and age, which may index changes in socio-emotional priorities and competence with stressors.

Discussion

In Study 2, we tested age differences on perceived threats in our four different types of negative events. We tested whether main effects of foregrounded psychological need on threats to adaptive functioning would be primarily attributable to relatedness being foregrounded as opposed to competence, as they were in Study 1. We tested

whether main effects of role on threats were primarily attributable to being the actor as opposed to target, as they were in Study 1. We tested whether main effects and interaction effects of foregrounded need and role were eliminated when we included individual differences in well-being and emotional stability and age using a more generalizable sample of community participants.

Main Effects of Age

We found a main effect of age on threats to adaptive functioning. Follow up correlations revealed negative relationships between age and all threat types except for avoidance motivation (positive but not statistically significant). This pattern broadly suggests that factors associated with aging may be protective against threats from negative events. We found statistically significant negative relationships between age and generalized self-efficacy, goal re-engagement, perceived self-worth (combination of perceived intelligence, effectiveness, and worth), perceived control, and perceived self-likeability. Later in this discussion and in the General Discussion we examine factors associated with aging in relation to two models of adaptive functioning in adulthood, the Competence-Environmental Press Model (Lawton & Nahemow, 1973) and Socioemotional Selectivity Theory (Carstensen et al., 1999).

Event Characteristics – Foregrounded Psychological Needs

Relatedness events were associated with greater feelings of loneliness than competence events, whereas competence events were associated with greater levels of threat to our composite measure of self-worth.

The items assessing loneliness prompted participants to think about the extent to which the event that they had just imagined for 2 minutes made them realize that they lack companionship, that they are no longer close to anyone, and feel isolated from important others. We would expect that negative events which foreground relatedness needs would be associated with higher reports of loneliness than negative events which foreground competence needs. That this is the only main effect that held across the two studies suggests that no matter one's age in adulthood and whether one acted to harm the relationship or was the target of harm, imagining negative relatedness events makes people feel lonely.

In addition, our composite measure of self-worth (which contained items about perceptions of effectiveness at work, intelligence, and being a person of worth) mapped well on to agency-related concerns that we anticipated would be more threatened by negative events that foregrounded competence than relatedness needs. That is what we found.

Whereas Study 1 results showed that when there was an effect of foregrounded need on adaptive functioning measures, it was more typical for relatedness events to be associated with higher levels of threat than competence events. Study 2 showed other forms of adaptive functioning that negative competence events threaten. These findings also suggest that although our older adults appear more resilient to adaptive functioning threats, they are not immune from such threats.

Event Characteristics – Role

Unlike Study 1, in Study 2, we did not find multivariate main effects of role on adaptive functioning threats (see Table 7 for the primary findings across studies). In Study 2, we did find (univariate analyses) that negative target events were more strongly associated with a desire to avoid a person that harmed one in the past than actor events were. One explanation of these findings may have to do with the ages of participants in Study 2. Perhaps by prioritizing positive social experiences, older adults may be more likely to distance themselves from someone who has harmed him or her in the past (target event), compared to when older adults have acted to harm another person (actor event).

This interpretation is supported by the idea that we did not find this difference on avoidance motivation between target and actor events in Study 1.
Whereas Study 1 was comprised of young adults (average age 22.46), Study 2 was made up of people aged 20 to 69 (average age 43.32).

Although we conceptualized having a desire to avoid those who caused one harm as a threat to adaptive functioning (because that motivation may preclude attempts to repair relationships), from another view, such a desire could be construed as reasonable or even as functioning adaptively. As we introduced earlier, with its emphasis on prioritizing close relationships with others and emotion regulation as time-horizons shorten, Socioemotional Selectivity Theory may predict that compared to younger adults, older adults would be more likely to endorse wanting to avoid those who have harmed them in the past (target events). This may be especially so if the older adult did not consider the person who harmed him or her as part of his or her "inner social circle." Unfortunately, when prompting avoidance motivation, we did not stipulate the type of

Table 7. Overall Pattern of Findings in Study 1 and Study 2.

	Study 1			Study 2 (with age as I.V.)		
Measure	Role	Need	Role* Need	Role	Need	Role* Need
Self-eff.	A > T*	NS	NS	NS	NS	NS
Goal Re-engage.	NS	NS	NS	NS	NS	NS
Self-Alienation	A > T*	NS	NS	NS	NS	NS
Psych. Minded. Int.	A > T*	R > C *	NS	NS	NS	NS
Psych. Minded. Will.	NS	R > C *	NS	NS	NS	NS
Self-worth	N/A	N/A	N/A	NS	C > R*	NS
Perceived Con.	NS	NS	Sig.*	NS	NS	NS
Empathy	T >A*	NS	NS	NS	NS	NS
Loneliness	NS	R > C*	NS	NS	R > C*	NS
IOSS	NS	NS	NS	NS	NS	NS
Perceived Like.	A > T*	R > C*	NS	NS	NS	Sig.*
Influence of Others	NS	NS	NS	NS	NS	Sig.*
Avoidance Motiv.	NS	NS	NS	T > A*	NS	NS

Note: Gen. Self-eff = Generalized Self-efficacy; Goal Re-engage. = Goal Re-engagement; Psych. Minded Int. = Psychological Mindedness Interest; Psych. Minded Will. = Psychological Mindedness Willingness; IOSS = Inclusion of Others in Self; Perceived Like. = Perceived Likeability; Avoidance Motiv. = Avoidance Motivation. A = Actor; T = Target; R = Relatedness; C = Competence; N/A = Not Applicable; Sig. = Significant; * $p < .05$ level or lower.

person (i.e., one from a close social relationship vs. not) that participants were to recall so we can only speculate about this possible explanation. Furthermore, we note that other "adaptive functions" such as psychological mindedness might also be more complex. For example, being psychologically minded about negative events could be associated with ruminating about such events.

Role by Foregrounded Need Interactions

In Study 2, we found that participants' perceptions of likeability were more threatened and participants felt more influenced by others when he or she was the actor in relatedness events compared to when he or she was the target in relatedness events. There was not a significant difference on threats to those adaptive functioning measures between actor/competence and target/competence events. Thus, the extent to which threats to likeability and feeling influenced by others is associated with negative relatedness events depends on whether one is the actor or target.

Participants may report feeling less likeable after recalling doing something that hurt an important relationship (relatedness event) because in addition to one's self, the experience of the victim may be definitional to a negative actor/relatedness event. To the extent that this sort of event leads one to reflect on the affective or physical harm caused to the victim, one may naturally feel "unlikeable."

It seems less apparent why, compared to being the target in a relatedness event, being the actor was associated with higher levels of threat to feeling influenced by others. Recall that influence of others is a subscale of the "Authentic Self Scale," which in total assesses the degree to which we behave in ways that are consistent with the authentic self

or not and the Influence of Others component of the scale assesses the extent to which our authenticity is constrained by others. It may be the case that people tend to perceive that others contributed to their own actions (i.e., there may be some provocation from others) when they think about doing something that undermined a relationship (negative actor/relatedness events). Alternatively, it may be causing someone else pain, and perhaps having to manage one's own feelings in relation to the pain that the victim has experienced, that results in a sense of responsibility for others and thus some "influence of others."

Individual Differences in Well-being, Emotional Stability and Their Interactions With Age

Our Study 2 findings suggest that the degree to which people feel threats across events are tied to complex combinations of individual differences like well-being, emotional stability, and age (which may index changes in socio-emotional priorities and competence with stressors). As in Study 1, when we accounted for individual differences in well-being and emotional stability, the relationships between types of events and types of threats were largely no longer statistically significant. Instead, we found strong main effects of well-being and emotional stability on levels of threats.

Examining variability in levels of threat across event types, we found that variability in levels of threat to psychological mindedness-interest threats was larger for high well-being individuals than low well-being individuals. Variability in levels of threats to feeling empathy for others and goal re-engagement was tied to differences in emotional stability. Individuals in our study who were more emotionally stable reported

greater variability in levels of threats to empathy and levels of threats to goal re-engagement across events. We also found interactions between our individual differences. Younger and older adults who differed on emotional complexity and well-being differed on variability in their levels of threats to distinct forms of adaptive functioning. Young adults who scored low on emotional stability and low on well-being had greater variability in threats to loneliness than young adults who scored low on emotional stability but high on well-being. Older adults did not display that pattern of variability in levels of threat.

Older adults who scored high on emotional stability and low on well-being had greater variability in levels of self-alienation threats than older adults who scored high on emotional stability and high on well-being. Furthermore, older adults who scored high on emotional stability but low on well-being had greater variability in levels of influence from others threats than older adults who scored high on emotional stability and high on well-being. Younger adults did not display that pattern of variability in levels of threat. In total, the pattern of findings with individual differences point to the potential value of using more powerful idiographic techniques like latent profile analysis. Latent profile analysis would allow us to determine whether or not there are particular combinations of individual differences that map on to particular patterns of threats by events. This, idiographic, approach may allow us to specify what combination of characteristics (older adults who score high on well-being by low on emotional stability) are associated with perceiving certain levels of threats in certain events. This would mark a potentially important contribution to the literature on person-situation interactions.

CHAPTER 4

GENERAL DISCUSSION

Researchers have sometimes blended negative events when studying the relationship between meaning-making and adaptive functioning. That approach has resulted in mixed findings such that in some studies, positive forms of meaning-making (e.g., narrating growth from the event) predict adaptive outcomes (Bauer & Bonanno, 2001; Mansfield et al., 2010; McAdams, Reynolds, Lewis, Patten, & Bowman, 2001; McLean & Pratt, 2006; Pals, 2006), whereas in others, similar forms of meaning-making predict maladaptive outcomes (McLean, Breen, & Fournier, 2010; Sales, Merrill, & Fivush, 2013; Styers & Baker-Ward, 2013). Because events and meaning-making are complex, there are likely many reasons for these mixed findings.

We conducted two studies to assess the extent to which particular types of adaptive function threats (e.g., feeling lonely) mapped onto particular types of negative events. We reasoned that if different types of events created specific types of challenges, the same form of positive meaning-making could address the challenges of one event but fail to address the challenges associated with the another. Thus, understanding variability in goodness-of-fit between meaning-making and threats to adaptive functioning by event type may clarify contexts in which positive meaning-making works for people.

What We Know About Event-specific Threats to Adaptive Functioning

Table 7 showed the pattern of main effects across the two studies. The only event-specific adaptive functioning threat that we found across the two studies was that negative relatedness events were associated with greater loneliness than negative competence events. Self-determination theory posits that the psychological need for relatedness is met when one feels meaningfully connected to others and feels that those important others recognize and value one's authentic self. The current findings (consistent with intuition) suggest that for adults from 20 to 69 years old, and from undergraduates to community members, negative events that foreground relatedness lead to higher levels of loneliness than negative events that foreground competence. This makes sense in the Self-determination Theory framework because meeting the need for competence is argued to have little to do with social closeness and positive relationships.

Although the event differences that we looked at did not consistently map onto threat-level differences, we did succeed in finding that people generally rated these negative events as presenting some degree of threat to a variety of different forms of adaptive functioning (see Tables 2 and 5). Thus, people in our studies appeared to be reporting on events that were generally troubling in a variety of different ways.

Individual Differences Matter for The Threat Levels That People Perceive From Negative Events

We found that well-being, emotional stability, and age mattered for the level of threat that people perceived from different types of negative events. We consistently

found that the majority of the variability in levels of threats to adaptive functioning across events was explained by individual differences in well-being and emotional stability. The strong main effects of well-being and emotional stability support the idea that the degree of threat to particular forms of adaptive functioning people experience are more tied to characteristics of individuals than to the (theoretical) "psychological needs" an event foregrounds or one's role in the event. These findings are consistent with theories that focus on person-situation interaction (Funder, 2008; Lazarus & Folkman, 1997). Overall, high well-being and high emotional stability were also related to increased variability in levels of threats across events and decreased average levels of threats across events. This combination may suggest that high well-being and high emotional stability is generally associated with compartmentalization of threats by event, whereas low well-being and low emotional stability may be generally associated with diffusion of threats by events. However, we need to conduct further studies to determine whether this is the case or not.

The Importance of Age-related Changes in Perceptions of Threat by Event

In Study 2, we also found a main effect of age on threat-levels and correlational analyses indicated that increased age is generally associated with decreased levels of perceived threats across events. One approach to understanding the extent to which person-environment fit matters for adaptive functioning, the competence-environmental press model (Lawton & Nahemow, 1973; Nahemow, 2000), argues that to the extent that environmental press (stressors from our environments) does not exceed competence, people will display positive cognitions and emotions and function adaptively. As we age

in adulthood, we may gain important experience that expands our levels of competence in dealing with environmental press. For example, learning from our successful and unsuccessful attempts to negotiate work and relationship challenges may help us develop competence. Such experience may "pay off" for adults by helping them remain centered in their beliefs that they are efficacious, that they can and will re-engage in pursuing important goals, that they are worthwhile despite negative events, and that they have some degree of control in their lives and are likeable.

An alternative explanation for these negative relationships between age and threats to adaptive functioning is provided by Socioemotional Selectivity Theory (Carstensen et al., 1999). Researchers have shown that shortening time horizons, the decreasing subjective sense of time until natural death, matters for social motivation and emotional information processing (Carstensen, 2006; Carstensen & Frederickson, 1998). Work in this tradition has argued that age, though not causal, is highly correlated with shortened time horizons and the changes in socio-emotional priorities that go along with shortened time horizons. For example, younger men living with HIV prior to the introduction of antiretroviral medications held views of their social relationships that were more similar to elderly individuals than to younger individuals, and their priorities in those relationships were more similar to the elderly individuals.

The effect of shortened time horizons is that unlike younger adults (who have longer time horizons, and consequently spend more time gathering new information and planning the future), older adults prioritize regulating their emotions in ways that maximize their psychological well-being. Shifts in socio-emotional priorities may help older adults avoid negative events, or cease thinking about negative events when they

cannot be changed. Importantly, those benefits may not extend to much more elderly individuals. The cognitive and physical changes associated with the very end of life may preclude those benefits. Nevertheless, in Study 2, we showed that at least until age 69, people report lower levels of threats across different types of negative events.

We also found in Study 2 that the combination of "levels" of individual differences (e.g., high well-being and low emotional stability) can have different implications for variability in the "levels" of threat for young and older adults. Indeed, younger and older adults who differed on emotional complexity and well-being differed on variability in levels of self-alienation threats and on levels of threats of being influenced by others.

Future Directions

Although we found that specific features of events do explain some of the variability in the levels of threat that people perceive in different types of events, the current findings strongly suggest that individual differences matter more for those perceptions of threat. Thus, it may be especially illuminating to take a more "person-centered approach" to analyzing these data. The person-centered approach admonishes (Magnusson, 1998) that understanding the totality of the individual rather than focusing on single "variables in isolation" is a more fruitful approach to understanding the psychological lives of individuals. Thus, the person-centered approach focuses on the combination of an individual's psychological, physical, emotional, cognitive, and cultural processes, because according to this approach, "who the individual" is can only be known by examining the dynamic interaction of each of these parts.

Though beyond what can be accomplished within the designs of the current studies, taking a more holistic, person-centered approach is an exciting possible direction. The results from the current studies suggest that perhaps the best way to understand how events are tied to types of adaptive functioning threats is to understand more about the individual. Indeed, our findings suggest that younger and older people who differ in unique ways on well-being and emotional complexity perceive threats differently for what were ostensibly similar types of events. Indeed, they may not perceive these events as similar at all. Our findings also suggest the possibility that people who are at similar standings on individual differences may perceive similar levels of adaptive function threats in similar types of negative events. Thus, a typological approach to persons may help us understand who experiences what types of threats when.

Latent profile analysis, a person-centered approach, is one technique that we might use to determine whether or not some people are similar in the types of threats that they experience in particular negative events. Latent profile analysis is used with continuous variables and is a method for finding subtypes of related classes of individuals from multivariate data. The goal then is to find out whether or not there are a certain number of groups that characterize one's data. For our data, it may the case that older, high-highs (adults older than 42 who are high in well-being and emotional stability) are qualitatively different in terms of the degree to which they experience threats from events compared to the young, low-lows (adults younger than 42 who are low in well-being and emotional stability).

Furthermore, we could potentially use other measures of individual differences that we collected (e.g., trait hostility, and self-compassion in Study 2) to characterize our

participants. The risk of latent profile analysis is that taking a classification approach like this obviously creates comparisons among people (categorizes them in groups) that may mask the individuality of persons in those groups. Nevertheless, this approach could be valuable. It could help move us beyond examining variables in isolation (or probing 3-way interactions as we did in Study 2) to even more closely examining how unique combinations of person characteristics may make people similar in the degree to which they experience threats in different negative events.

Limitations

In Study 2, we found that the participants who we dropped from the sample were lower on conscientiousness than those who were kept in the sample for final analyses. Consequently, the findings from Study 2 may only be generalizable to those community dwelling adults who are high on trait conscientiousness. A similar limitation may be that using online data collection methods may limit the population of adults to which we can generalize (perhaps only to those who regularly use computers as MTurk workers online). Past work shows that MTurk participants provide data that are as high-quality as undergraduate participants (Buhrmester, Kwang, & Gosling, 2011). However, it is possible that MTurk participants do differ in some meaningful way from the general population of adults in the United States.

We also did not anticipate that the relatedness and competence events would require adaptive functioning threats that were so closely about self-perceptions of intelligence and effectiveness at work. It was not until in Study 2, when we added those questions as a measure of adaptive functioning, that we were able to find differences on

threat types between negative events that foregrounded either competence or relatedness. However, since Study 2 used community dwelling, as opposed to college students, in the sample, it is possible that the difference among competence and relatedness events on threats to perceived intelligence, effectiveness at work, and self-worth has something to do with this shift in sample make up. We cannot fully disentangle this finding with the current data. Analyzing relationships between events that foreground competence or relatedness needs and threat types with only the 20-year-olds in Study 2 leaves us with little power to detect effects and thus compare to the young adults in Study 1.

We did not collect data on employment status, or whether our MTurk participants were students or not. These would have been useful data to have as they may have allowed us to explore relationships between negative competence events and types of work participants were engaged in. Knowing whether or not the 20-year-old group in the MTurk sample were students would have given us better grounds to compare the Study 1 participants to the Study 2 young adults.

As of the writing of this document, we have not yet completed coding of the data for time since event (this work is underway). We will want to control for time since the event to make sure that older and younger adults do not differ on threats perceived if they differ on the ages of the event memories that they nominated. Similarly, we did not obtain memories as they happened; rather, we got memories of past events when people participated. Thus, past meaning-making about these events may change the level of threat that people feel when they recall them. To the extent that individual differences in well-being and emotional stability are associated with different ways of making meaning that may help put negative events in the past (or let them continue to be troubling), those

individual differences in meaning-making may account for differences in perceived levels of threat.

Another possible limitation of our studies is that collecting all of our data online in a questionnaire/survey format led to common method variance. Thus, it is possible that the online format of answering questionnaires may have affected participants' responding, such that patterns of intercorrelations among test items could differ compared to if we had used multiple data collection methods.

Conclusion

We set out to examine whether people experience specific types of threats when they experience specific types of negative events. Initial evidence suggested that specific types of threats were linked to specific event features such as whether the event foregrounded competence or relatedness or one was the actor or target in the event. However, when we accounted for individual differences in well-being, emotional stability, and age, ties between threats and events were largely severed. Thus, whereas we began with the idea that threats might be "event-based," these studies indicate that perceived threats from negative events are more person-based.

The implications of this set of findings for future work are twofold. First, it may be fruitful to use idiographic methods to try and determine whether some types of people (but not others) perceive similar types of threats in some types of negative events. Second, to the extent that people do cluster in perceiving specific threats in specific events, beneficial meaning-making about negative events will likely also be an idiographic process (McLean & Mansfield, 2011). Thus, to more fully disentangle when

and why meaning-making works to produce positive adaptation to negative life events, we may need to examine whether the meanings particular people make fit the threats that he or she perceives from that event.

APPENDIX A

DATA PREPARATION

Study 1

Prior to multivariate analysis, all measures were examined (through various SPSS commands) for missing values, accuracy of data entry, outliers, and fit between distributions and assumption of multivariate analysis (see Table 8). Of the original 183 participants, 4 missed large portions of the survey. One participant (ID. 69) was missing 13.2% of the data (34 total items). That person did not respond to any of the adaptive functioning items for the actor-competence threat because she reported that she could not think of such an event. Another person (ID. 160) was missing 17.2% of the data (44 items). She also reported not being able to think of an actor-competence threat and failed to respond to 10 other items scattered through the data set. One person (ID. 81) was missing 52.7% of the data (135 total items) because she could only recall a target relatedness event and had sporadic missing data elsewhere. Another person (ID. 18) was missing 16.4% of the data (42 total items). That person nominated an actor competence event. However, he or she failed to answer numerous questions regarding the event and had sporadic missing data elsewhere. Participants 18, 69, 81, and 160 were dropped from analyses.

Table 8: Assumptions of Normality: Skewness Z-scores by Event Type Study 1.

	Actor/Comp.	Target/Comp.	Actor/Related.	Target/Related.
Self-Alienation	6.10*	6.01*	6.01*	8.15*
Influence of Others	2.78	3.28	2.38	2.81
Gen. Self-eff.	0.70	2.17	.86	1.38
Perceived Con.	-.039	.69	.51	.31
UCLA Loneliness	7.21*	7.12*	5.05*	6.03*
Davis Empathy	.15	-.40	.62	-.27
Avoidance Motiv.	1.73	.69	1.13	.78
Perceived Like.	1.53	2.23	-.25	1.97
IOSS	.42	.57	1.12	.47
Psych. Minded. Int.	-.027	1.56	-2.49	.97
Psych. Minded. Will.	1.34	2.59	1.14	1.61
Goal Re-Engage.	1.43	2.38	2.19	1.95

Note: Gen. Self-eff. = Generalized Self-efficacy; Perceived Con. = Perceived Control; Psych. Minded. Int. = Psychological Mindedness Interest; Psych. Minded. Will. = Psychological Mindedness Willingness; IOSS = Inclusion of Others in Self; Goal Re-engage. = Goal Re-engagement.

We then used Little's MCAR (Missing Completely At Random) test to formally test the assumption that missing data in the file for the remaining 179 participants were missing completely at random. Descriptives from this test showed that 4 people (2.2% of the sample tested) failed to respond to interest in psychological mindedness for the actor relatedness event and 4 people failed to respond to the perceived likeability item for the target relatedness event. All other items had fewer than 4 people fail to respond, and missing items were sporadically scattered throughout the data set. Indeed, 160 individuals (89.4%) had no missing data on any measures of adaptive functioning, and 17 individuals (9.5%) failed to complete at most one adaptive functioning measure across the four events.

Little's MCAR test was not statistically significant, $\chi 2 = 403.72$ (22,133), $p = 1.00$, suggesting that the data for the sample of 179 participants were missing completely at random. However, as noted above, multivariate analyses were conducted on the 125 individuals who accurately recalled all events that fit with the type of event prompted for. For those 125 individuals, I checked for errors in the data file by looking for plausible minimum and maximum values and means and standard deviations for each scale. All values were plausible. There were no inaccuracies in moving data from Qualtrics to SPSS. All scale scores for the dependent variables were accurately computed as averages from the individual items.

We then screened the adaptive functioning, dependent measures to determine whether they were normally distributed. I screened for outliers at the same time. Because my analyses were done on grouped data (MANOVA), outliers on the adaptive functioning measures were screened separately for each of the four event groups

(Tabachnik & Fidell, 2007). I assessed the distribution of the variables by examining histograms with normal curves imposed over the data for each variable tested. I also computed z-scores for the skewness and kurtosis statistics for each variable. Skewness z-scores greater than +/- 3.29 warrant rejection of the null hypothesis that values on that variable are normally distributed (Tabachnik & Fidell, 2007; West, Finch, & Curran, 1995). Thus, I screened for variables with skewness z-scores greater than +/-3.29. I also examined expected normal probability plots and detrended expected normal probability plots for each adaptive functioning measure (by group) and each individual differences measure.

We used box and whisker plots to look for outliers on the variables of interest. For actor/competence, outliers were found on self-alienation (1 case), and UCLA Loneliness (1 case). For target/competence, outliers were found on UCLA Loneliness (2 cases). For actor/relatedness, there were no such cases, and for target/relatedness, outliers were found on self-alienation (2 cases). All outliers were greater than +3.29 standard deviations from the mean. Examination of box and whisker plots after data transformation showed that the outliers were no longer as extreme deviations from means as they were originally. Thus, those few individuals whose scores had been larger outliers before transformation were kept in the data set.

We transformed all variables that were substantially positively skewed (at +/- 3.29 or greater) by taking the square root of the values on that variable (Tabachnick & Fidell, 2007). The square root transformation also has the salutary effect of reducing the influence of the outliers (Tabachnick & Fidell, 2007). I computed square root transformations for self-alienation, loneliness, and influence of others variables. Although

influence of others for target/competence events was the only group with skewness z-score of greater than +3.29, I transformed influence of others for the other three events (actor/competence, actor/relatedness, target/relatedness) to maintain a similar magnitude of scores for testing differences between the means of influence of others on those events. Data were analyzed on the transformed variables for the 125 individuals who recalled all four events correctly.

Study 2

Prior to multivariate analysis, all measures were again examined for missing values, accuracy of data entry, outliers, and fit between distributions and assumption of multivariate analysis (see Table 9). Of the original 224 participants, 6 missed large portions of the survey; 2 of these individuals were in the 20-year old age group. One of those individuals failed to respond to target competence adaptive functioning measures and 1 failed to respond to any of the adaptive functioning measures. Two individuals were in the 50-year old age group and 1 of those participants only responded to the target relatedness event prompt (disregarding), and failed to respond to the target competence and target relatedness prompts. Finally, 2 individuals were in the 60-year old age group and 1 provided responses to the adaptive functioning measures but did not provide anchoring titles for the memories, and 1 failed to respond to any of the adaptive functioning measures. As noted in the method section, I narrowed data analysis to only those individuals who recalled all four events correctly and to those who correctly answered the three attention check items.

Because of a problem with SPSS that neither we nor technology consultants in the

Table 9: Assumptions of Normality: Skewness Z-scores by Event Type Study 2.

	Actor/Comp.	Target/Comp.	Actor/Related.	Target/Related.
Self-Alienation	6.51*	6.62*	5.16*	6.50*
Influence of Others	3.03	2.31	3.94*	5.21*
Gen. Self-eff.	-.30	.58	.73	1.47
Perceived Con.	-0.19	-0.33	-0.32	-.42
UCLA Loneliness	8.47*	7.35*	5.30*	6.64*
Davis Empathy	.16	.88	1.05	.36
Avoidance Motiv.	3.35*	.03	1.54	-.08
Perceived Like.	1.16	1.56	-.82	-.84
IOSS	3.04	1.85	2.75	2.57
Psych. Minded. Int.	1.56	-3.35*	1.33	-4.00*
Psych. Minded. Will.	3.97*	2.87	2.22	3.11
Goal Re-engage.	.08	.76	-0.25	1.74
Perceived Worth	3.10	3.60*	3.65*	6.57*

Note: Gen. Self-eff. = Generalized Self-efficacy; Perceived Con. = Perceived Control; Psych. Minded. Int. = Psychological Mindedness Interest; Psych. Minded. Will. = Psychological Mindedness Willingness; IOSS = Inclusion of Others in Self; Goal Re-engage. = Goal Re-engagement.

social and behavioral computing center have been able to fix, we were unable to run Little's MCAR test on Study 2 data. SPSS gave an error code (repeatedly when trying with different ways of conducting the test and trying on several different computers) that there was "insufficient memory to run the test." To look for patterns and to assess problems with missing data, we created a measure of the number of items missed for each individual for each measure in the study. For the final 141 participants in Study 2, there appeared to be no consistent patterns of missing data (i.e., those participants did not appear to be filling in some items while missing large sections of responses elsewhere). For the final 141 individuals, I checked for errors in the data file by looking for plausible minimum and maximum values and means and standard deviations for each scale. All values were plausible. As in Study 1, there were no inaccuracies in moving data from Qualtrics to SPSS. All scale scores for the dependent variables were accurately computed as averages from the individual items.

We then followed the same procedure in Study 1 and screened the adaptive functioning, dependent measures to determine whether they were normally distributed. I screened for outliers at the same time. Because my analyses were done on grouped data (MANOVA), outliers on the adaptive functioning measures were screened separately for each of the four event groups (Tabachnik & Fidell, 2007). I computed z-scores for the skewness and kurtosis statistics for each variable. Skewness z-scores greater than +/- 3.29 warrant rejection of the null hypothesis that values on that variable are normally distributed (Tabachnik & Fidell, 2007; West, Finch, & Curran, 1995). We also examined expected normal probability plots and detrended expected normal probability plots for each adaptive functioning measure (by group) and each individual differences measure.

We used box and whisker plots to look for outliers on the variables of interest. For actor/competence, outliers were found on self-alienation (7 cases), perceived likeability (4 cases), and UCLA Loneliness (9 cases). For target/competence, outliers were found on self-alienation (4 cases) and UCLA Loneliness (11 cases). For actor/relatedness, outliers were found on self-alienation (4 cases), and for target/relatedness, outliers were found on self-alienation (7 cases), UCLA Loneliness (4 cases), and perceived worth (7 cases).

We transformed variables that were substantially positively skewed (at +/- 3.29 or greater) by taking the square root of the values on that variable and transformed variables that were substantially negatively skewed by creating a new variable computed as the square root of a constant subtracted from the value each individuals score (Tabachnick & Fidell, 2007). Those transformations reduce the influence of the outliers (Tabachnick & Fidell, 2007). I computed square root transformations for self-alienation, loneliness, and influence of others, perceived worth, and psychological mindedness willingness variables. I computed square root of 6 – X (where X is the value of each individual's score) for psychological mindedness interest. I chose 6 because references suggest using a constant from which each score is subtracted so the smallest score is 1 (Tabachnick & Fidell, 2007, p. 89).

Consistent with Study 1, in cases where a given variable was skewed for only one or two event types (such as psychological mindedness willingness in actor/competence events), I transformed all event types on that variable to maintain a similar magnitude of scores. Data were analyzed on the transformed variables for the 141 individuals who recalled all four events correctly and who responded correctly to all three attention check items (see Table 8 and Table 9).

APPENDIX B

CONSENT PAGE

The purpose of this research study is to examine how different types of negative events relate to different types of challenges. The results of this study will advance our understanding of what stressors are linked to what types of experiences. We are doing this study because knowing this information may help us understand why some forms of coping work for some types of negative events but not others.

This study will ask you to report on your views about different types of difficult experiences. You will be asked to think about different types of negative events. You will be asked to honestly respond to ways that those events made you feel and think. You will also be asked to fill out questionnaires about your self. You will write descriptions of 4 events that you have experienced. Though some people report negative feelings after thinking about difficult experiences, there are no anticipated risks or discomfort associated with participation. University of Utah undergraduates, if you feel upset after the study and wish to talk to someone about your experiences please do not hesitate to contact the University of Utah Counseling Center at: 801-581-6826.

We cannot promise any direct benefit for taking part in this study. However, we hope that the information we get from this study will help develop a greater

understanding of how different negative events lead to different types of stressors. Knowing that may help us understand how people can effectively cope with daily stressors. You will receive 1.5 hours of research credit for engaging in this study. However, as an undergraduate if you choose not to participate in this or any other study you can get equivalent credit in alternative ways. See your specific instructor's course syllabus for details.

Your data will be kept confidential. Participants will be assigned a unique study identification number. Any other identifying information associated with the unique ID number will be deleted monthly until data collection is completed. All computerized participant information will be kept in a password-protected database administered by the College of Social and Behavioral Sciences at the University of Utah with access limited to the researcher and staff supervised by the researcher. Reference to participant information will be by unique study identification number only. Data will be reported in the form of summaries about groups, not particular individuals. Some written narratives may be displayed for publication or presentation of the project but those narratives will not be linked to the participant and names and other details will be altered to further protect your privacy. However, if you disclose actual or suspected abuse, neglect, or exploitation of a child, or disabled or elderly adult, the researcher or any member of the study staff must, and will, report this to Child Protective Services (CPS), Adult Protective Services (APS) or the nearest law enforcement agency. In addition, there are some cases in which a researcher is obligated to report non-illegal but ethically borderline issues, such as serious threats to one's personal, public health or public safety.

If you have questions about this study before deciding to participate (or any complaints or concerns about this study during or after participating), you can contact Cade Mansfield at 801-581-8560 (cade.mansfield@psych.utah.edu). Or, you may Monisha Pasupathi at 801-585-9175. Both of whom may be reached during the week from 9 AM to 5 PM. Contact the Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also, contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Utah IRB may be reached by phone at (801) 581-3655 or by e-mail at irb@hsc.utah.edu.

It should take 1.5 hours to complete the questionnaire. Participation in this study is voluntary. You can choose not to take part. You can choose not to finish the questionnaire or omit any question you prefer not to answer without penalty or loss of benefits. By clicking next below and returning this questionnaire, you are giving your consent to participate. We sincerely appreciate your taking time to complete this survey. If you don't want to participate simply log out and close your browser. Thank you very much!

APPENDIX C

EVENT PROMPTS

Actor-Competence Prompt

Now I want you to think of a time when you did or said something that negatively affected your sense of competence in an area that is important to you. I want you think of a time when it was your own actions that led to this outcome.

Target-Competence Prompt

Study 1 - Now I want you to think of a time when someone close to you did or said something that negatively affected your sense of competence in an area that is important to you. I want you think of a time when it was the other person's actions that led to this outcome.

Study 2 - Now I want you to think of a time when someone else did or said something that negatively affected your sense of competence in an area that is important to you. I want you think of a time when it was the other person's actions that led to this outcome.

Actor-Relatedness Prompt

Now I want you to think of a time when you did or said something that negatively affected a relationship that's important to you. I want you think of a time when it was your own actions that led to this outcome

Target-Relatedness Prompt

Now I want you to think of a time when someone close to you did or said something that negatively affected a relationship that is important to you. I want you think of a time when it was the other person's actions that led to this outcome.

APPENDIX D

NARRATIVE PROMPTS

Participants were randomly assigned to write a narrative of one of the four events that they had imagined using the basic event details that they generated to anchor the memory. The Qualtrics system allows one to use display logic to loop information provided at earlier points in a study to appear at later points. I used that display logic to remind participants of a key detail that they had provided about that memory in prior to imaging it. The narrative prompts were designed to elicit a full story with factual and interpretive details. Prompts are presented below.

Actor-Competence

Now we would like you to WRITE A FULL STORY stating WHAT HAPPENED that time when you did or said something that negatively affected your sense of competence in an area that was important to you. Tell us all of the details of the event, including who was involved, what happened, how the event affected your feelings and thoughts about yourself, what the event means to you, and anything you learned from the event. As a reminder, you mentioned that you did this: {Qualtrics Display Logic Code Here}

Target-Competence

Now we would like you to WRITE A FULL STORY stating WHAT HAPPENED that time when someone close to you did or said something that negatively affected your sense competence in an area that was important to you. Tell us all of the details of the event, including who was involved, what happened, how the event affected your feelings and thoughts about yourself, what the event means to you, and anything you learned from the event. As a reminder, you mentioned that you did this: {Qualtrics Display Logic Code Here}

Actor Relatedness

Now we would like you to WRITE A FULL STORY stating WHAT HAPPENED that time when you did or said something that negatively affected a relationship that was important to you. Tell us all of the details of the event, including who was involved, what happened, how the event affected your feelings and thoughts about yourself, what the event means to you, and anything you learned from the event. As a reminder, you mentioned that you did this: {Qualtrics Display Logic Code Here}

Target Relatedness

Now we would like you to WRITE A FULL STORY stating WHAT HAPPENED that time when someone close to you did or said something that negatively affected a relationship that was important to you. Tell us all of the details of the event, including who was involved, what happened, how the event affected your feelings and thoughts about yourself, what the event means to you, and anything you learned from the event.

As a reminder, you mentioned that the other person did this: {Qualtrics Display Logic Code Here}

APPENDIX E

MEASURES AND NUMBERS OF ITEMS: STUDY 1

Scale Function	Scale Name	Number of Items	Number of Times Assessed	Possible Responses per Participant per Scale
Individual Difference Meas.	Big Five Inventory	44	1	44
	Trait Hostility	8	1	8
	Well-being	54	1	54
Manipulation Check	Basic Needs Satisfaction	3	4	12
Quality of Memory	Difficulty of Recalling memory	1	4	4
	Vividness of Memory	1	4	4
Dependent Variables.	Subjective Vitality Scale	3	4	12
	Self-Alienation Scale	3	4	12
	Accepting Influence of Others Scale	3	4	12
	Perceived Choice Scale	3	4	12
	Generalized Self-Efficacy Scale	3	4	12
	Locus of Control Scale	3	4	12
	Goal Re-engagement Scale	3	4	12
	UCLA Loneliness Scale	3	4	12

	Davis Empathy Scale	3	4	12
	Interest in Psychological Mindedness	1	4	4
	Psychological Mindedness Willingness Scale	1	4	4
	Avoidance Motivation Scale	3	4	12
	Self-likeability	1	4	4
	Inclusion of Others in Self Scale	1	4	4
Grand Totals				262

APPENDIX F

MEASURES AND NUMBERS OF ITEMS: STUDY 2

Scale Function	Scale Name	Number of Items	Number of Times Assessed	Possible Responses per Participant per Scale
Individual Difference Meas.	Big Five Inventory	44	1	44
	Trait Hostility	8	1	8
	Well-being	54	1	54
	Self-Comp.	12	1	12
Manipulation Check	Basic Needs Satisfaction	3	4	12
Quality of Memory	Difficulty of Recalling memory	1	4	4
	Vividness of Memory	1	4	4
Dependent Variables	Subjective Vitality Scale	3	4	12
	Self-Alienation Scale	3	4	12
	Accepting Influence of Others Scale	3	4	12
	Perceived Choice Scale	3	4	12
	Generalized Self-Efficacy Scale	3	4	12
	Locus of Control Scale	3	4	12
	Goal Re-engagement Scale	3	4	12
	UCLA Loneliness	3	4	12

	Scale			
	Davis Empathy Scale	3	4	12
	Interest in Psychological Mindedness	1	4	4
	Psychological Mindedness Willingness Scale	1	4	4
	Avoidance Motivation Scale	3	4	12
	Self-likeability	1	4	4
	Inclusion of Others in Self Scale	1	4	4
	Perceived Self-worth	1	4	4
	Perceived Work effectiveness	1	4	4
	Perceived Intelligence	1	4	4
	Personal Attributes Questionnaire	16	1	16
	Meaning-Making	15	1	15
Grand Total				317

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